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Project PEPE-NEROS (Persistent Elevated Pollution Episodes-North East Regional Oxidant Study) (1980) Description of the Data Base

Washington Univ., St. Louis, MO

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Project PEPE-NEROS was a major EPA-sponsored field measurements program conducted during the summer of 1980 out of Columbus, Ohio. The dual objectives were to create data bases for (a) the study of the evolution and composition of regional haze episodes occurring in northeastern U.S., particularly during summer months, and (b) the study of oxidant formation and transport in urban plumes and on regional scale. Many research groups representing EPA, NASA and other government agencies, as well as industry and universities participated in the field study. The overall data base of PEPE-NEROS was centralized and standardized at Washington University. This two-part report describes and documents the data base and its availability. Part I overviews the measurements and the data base, and lists the many reports which contain details of the measurement platforms and their missions. Part II gives documentation of the final General Distribution Data Base of PEPE-NEROS which is contained on two magnetic tapes.

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DESCRIPTION OF THE DATA BASE

by

Noor V. Gillani
Mechanical Engineering Department
Washington University
St. Louis, Missouri 63130

EPA Co-Operative Agreement No. CR-809713

Project Officer
Francis Pooler, Jr.

ATMOSPHERIC SCIENCES RESEARCH LABORATORY
OFFICE OF RESEARCH AND DEVELOPMENT
U.S. ENVIRONMENTAL PROTECTION AGENCY
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27711

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Project PEPE-NEROS was a major EPA-sponsored field measurements program conducted during the summer of 1980 out of Columbus, Ohio. The dual objectives were to create data bases for (a) the study of the evolution and composition of regional haze episodes occurring in northeastern U.S., particularly during summer months, and (b) the study of oxidant formation and transport in urban plumes and on regional scale. Many research groups representing EPA, NASA and other government agencies, as well as industry and universities, participated in the field study. The overall data base of PEPE-NEROS was centralized and standardized at Washington University. This two-part report describes and documents the data base and its availability. Part I overviews the measurements and the data base, and lists the many reports which contain details of the measurement platforms and their missions. Part II gives documentation of the final General Distribution Data Base of PEPE-NEROS which is contained on two magnetic tapes.

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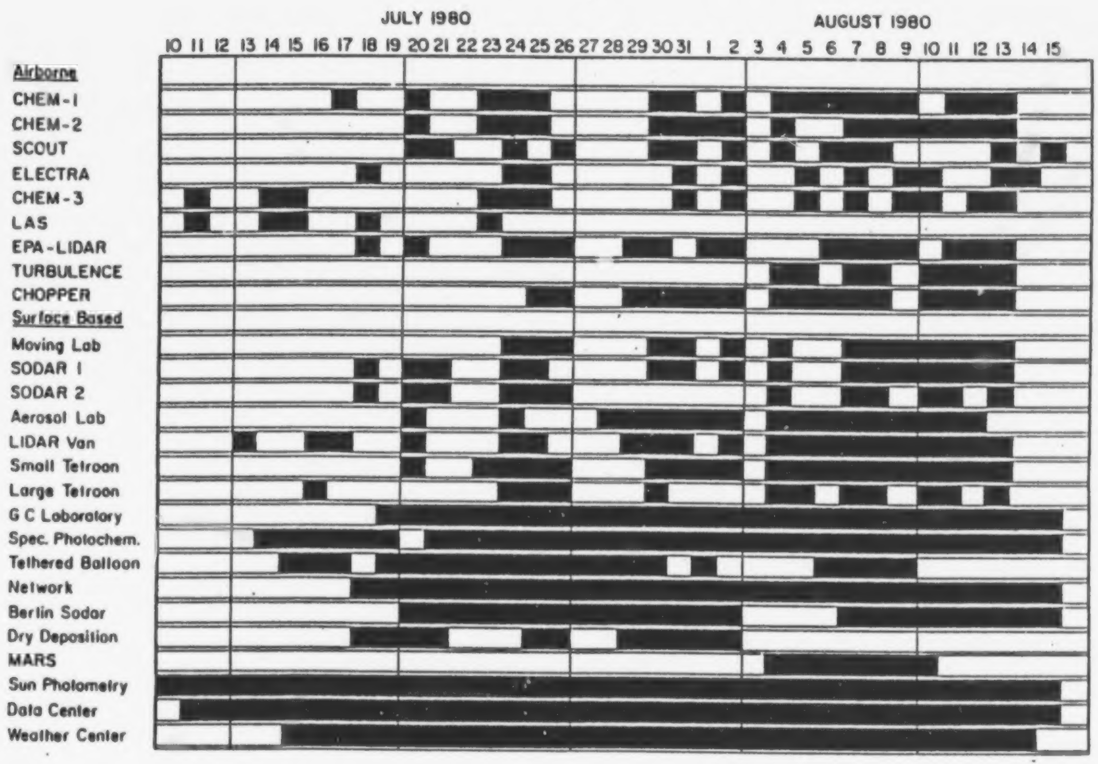
LIST OF ABBREVIATIONS

AES = Atmospheric Environment Service, Canada
AMS = American Meteorological Society
ANL = Argonne National Laboratory, Argonne, IL (DOE)
AV = Aerovironment, Inc., Monrovia, CA
BERTIN = Bertin-Cie, Paris, France
CHEM-I = Chemical Sampling Aircraft of EMI
CHEM-II = Chemical Sampling Aircraft of AV
CHEM-III = Chemical Sampling Aircraft of NASA-LaRC
CHOPPER = Chemical Sampling Helicopter of EPA/EMI/TVA
DOE = U.S. Department of Energy
EMI = Environmental Measurements, Inc., San Francisco
EPA = U.S. Environmental Protection Agency
EPA-ASRL = Atmospheric Sciences Research Laboratory of EPA in Research Triangle Park, NC
EPA-ASRL-MAD = Meteorology & Assessment Division of EPA-ASRL
EPA-ASRL-RFSO = Regional Field Studies Office of EPA-ASRL
EPA-EMSL = Environmental Monitoring Systems Laboratory of EPA in Las Vegas, NV
EPA-LV = EPA-EMSL
FAA = Federal Aviation Administration
GDDB = General Distribution Data Base
HSRL = High Spectral Resolution Lidar in NASA-LaRC's Electra Aircraft
LAS = Laser Absorption Spectrometer in NASA-JPL's Queen Air Aircraft
MARS = Microwave Atmospheric Remote Sensor of NASA-JPL
NASA = National Aeronautics and Space Administration
NASA-GSFC = Goddard Space Facilities Center of NASA in Greenbelt, MD
NASA-JPL = Jet propulsion Laboratory of NASA in Pasadena,CA
NASA-LaRC = Langley Research Center of NASA in Hampton, VA
NCAR = National Center for Atmospheric Research of NSF in Boulder, CO
NEROS = North-East Regional Oxidant Study of EPA-ASRL-MAD
NOAA = National Oceanic and Atmospheric Administration
NOAA-ARL = Atmospheric Research Laboratory of NOAA in Idaho Falls, ID
NOAA-ERL = Environmental Research Laboratory of NOAA in Boulder, CO
NSF = U.S. National Science Foundation

PEPE = Persistant Elevated Pollution Episodes
RTI = Research Triangle Institute, Research Triangle Park, NC
SCOUT = Chemical Sampling Aircraft of SRI
SRI = SRI International, Menlo Park, CA
TVA = Tennessee Valley Authority
UVDIAL = Ultraviolet Differential Absorption Lidar in NASA-LaRC's Electra Aircraft
WU = Washington University of St. Louis, MO



Days of operation of platforms during PEPE/NEROS.
(Vaughan et al, 1982)

FIGURE 1. SUMMARY OF PLATFORMS DEPLOYMENT DURING PEPE/NEROS FIELD STUDY
(Taken from Vaughan et al, 1982)

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The authors gratefully acknowledge the contributions of the many participants of Project PEPE-NEROS in the compilation of this data base. We also thank John Schiermeier and Steve Swope of Washington University for their assistance in various phases of the processing and management of this data base.

TABLE 2

PEPE/NEROS 1980

SUMMARY OF MISSIONS OF THE PRIMARY SAMPLING AIRCRAFT

DATE	TYPE OF MISSION	SAMPLING TIMES AV	SAMPLING TIMES EMI	SAMPLING TIMES SRI	AIR MASS QUALITY
7/14-19	Test Flights (Instrumentation problems)				
7/20	Columbus Plume Study (Short range)	1220-1430	1320-1710	0900-1300	Moderately polluted
7/21	RAMC* Area Inflow Characterization	-	-	0720-1020	Moderately polluted
7/23	Test flights				Clean
7/24	Conesville Power Plant Plume Study				Clean
7/25	" " " " "				"
7/26	Columbus Plume Study (Short range)	-	-	0920-1320	Polluted; very hazy
7/30	Urban Plume Study (Columbus)	1300-1715	1045-1530	0700-0945	Moderately polluted
	" " " (Dayton, Cinc'y)	-	-	1200-1930	" "
	Air mass characterization (COL-WVA)	2100-0000	-	-	" "
7/31	Columbus Plume Study	1330-2330	1200-1700	-	" "
	Regional Plumes Study	-	-	1700-1700	" "
8/01	PEPE chase (COL-NJ)	1430-2230	-	-	" "
8/02	Urban Plume Study (Dayton, Cinc'y)	1300-1700	1100-1530	-	" "
	Columbus Plume Study	-	-	1245-1500	" "
8/04	Columbus Plume Study	1000-1830	1245-0000	0600-1600	" " (cloud encounters)
8/05	Combined PEPE and RAMC Study	-	1540-2220	-	
8/06	During Aug. 5-11, a Bermuda High Pressure Cell penetrated much of eastern U.S. (Aug. 5, 6, 7), then gradually weakened and receded (Aug. 8, 9, 10, 11). Relatively stagnant conditions in the southeast led to the accumulation of haze aerosol in the southwesterly flow on the back side of the high (Aug. 7, 8). A large, but not very intense, PEPE remained in the eastern U.S. (Aug. 8, 9, 10) and was finally washed away to and off the east coast (Aug. 11, 12). RAMC conditions prevailed in the northeast U.S., with westerly or southwesterly flow during Aug. 8-11. During this week of activities, flights ranged from the east coast to Texas.	-	0030-0430	1400-2100	
8/07		1230-2130	1530-0100	0700-2200	Various stages of PEPE (not very intense)
8/08		0800-2330	1030-2100	0900-2100	
8/09		0030-0230 1915-2230	1015-2115	-	
8/10		1030-2030	-	-	
8/11		1045-1445	1115-0000	-	
8/12	Columbus Plume Study	1330-1800	1445-1845	-	Clean
8/13	Columbus Plume Study	1830-2115	1245-2045	1000-2100	Fairly clean (Possible plume-cloud encounters)
8/15	Urban Plume Study (Detroit, Toledo)	1220-2100	?	0800-1800	Clean

*RAMC = Regional Air Mass Characterization

PART I. MEASUREMENTS AND DATA BASE OVERVIEW

1. INTRODUCTION

Project PEPE-NEROS was a large field measurements program sponsored by the Atmospheric Sciences Research Laboratory (ASRL) of the U.S. Environmental Protection Agency (Vaughan et. al., 1982; Vaughan, 1985). It was carried out during the summer of 1980. It represented a co-ordination of two separate, but related, projects (PEPE and NEROS), each principally sponsored by a different branch of the ASRL. Project PEPE (Persistent Elevated Pollution Episodes) was sponsored and directed by the Regional Field Studies Office (RFSO) of ASRL, and its principal objectives were to investigate the evolution, dynamics, kinetics, spatial-temporal distribution, chemical composition, and optics of regional haze episodes frequently occurring over multi-state areas of the northeastern quadrant of the U.S., particularly during summer months. Project NEROS (North East Regional Oxidant Study) was sponsored by the Meteorology and Assessment Division (MAD) of ASRL with the principal objectives of investigating the formation and transport of oxidants within urban plumes and over the regional scale. Regional haze episodes (or PEPEs) generally occur only a few times during the summer in northeastern U.S., each one typically lasting a week or less, depending largely on meteorology. Deployment of a large field effort continuously over a 5 or 6 week period to study just PEPEs was thus considered unwise, and the partnership of PEPE and NEROS was the prudent and practical solution, in which the emphasis during non-PEPE interludes was on urban-scale studies. The field study was conducted over the period 15 July-15 August 1980, and was based at the Ohio State University in Columbus, Ohio. A concurrent second field study of NEROS was also being conducted in the Baltimore-Washington area under the sponsorship of ASRL-MAD.

While EPA was the principal sponsor of the PEPE-NEROS study, NASA also played a major role through its own funded participation. DOE, NOAA, FAA, TVA, and NSF (NCAR) were other federal agencies with significant participation. There was also major participation from industry and universities. Major responsibility for organization, co-ordination and implementation of the field study was given by EPA to a team of prime contractors (EMI, AV, SRI) with a number of subcontractors also providing wide-ranging support. Direct grants by both EPA and NASA also assured independent participation of universities. There was a conscientious effort made, under the direction of the prime contractor team, to co-ordinate the efforts of such a broad participation towards a stated common overall objective.

The many participants specialized in a broad range of measurement techniques and capabilities. The measurements were diverse, but complementing, and included chemical, optical and meteorological measurements, made from stationary and mobile platforms, both ground-based and airborne, in-situ and remote-sensing, covering spatial-temporal scales ranging from microscale turbulence to synoptic scale haze, both within and outside the planetary boundary layer.

An extensive data base was generated as a result, with substantial effort having been invested in quality assurance. The contractor team carried out internal Q.A. of their own platforms (Pettus and Tombach, 1985), and an external auditor (RTI) carried out an independent audit of not only the contractor team platforms, but of others as well (Arey, et.al., 1981). A well-equipped data center was set up in Columbus by the overall PEPE-NEROS data management team from Washington University to computerize, on a daily basis, the data of the four principal chemical measurements aircraft operated by the contractor team (CHEM-I, CHEM-II, SCOUT, and CHOPPER). This effort made possible a rapid on-site quality check of the data and also provided some scientific feedback to the field project staff concerning the performance of specific experimental missions relative to their objectives. Following the field program, individual data collecting groups performed their own data reduction and validation. The "clean" final data were then submitted to the PEPE-NEROS Data Manager (author of this report) for archival in the formal PEPE-NEROS data base. The data were converted to standardized formats, further documented as necessary, and in most cases, segregated and grouped by day of measurement. A final condensed data base was delineated for the purpose of general distribution. This final data base, the General Distribution Data Base (GDDB) of PEPE-NEROS, is now being made available to potential users on two 2400-foot magnetic tapes in a form which is beieved to be very user-friendly and thoroughly documented. It is also complete enough to meet the needs of almost all potential users, regardless of their special interest in the data base. Part II of this report contains a documentation of the GDDB.

In addition to the GDDB, a number of hard copy reports prepared by individual data collecting organization are also part of the final PEPE-NEROS data base. These reports contain details of the measurement platforms and instrumentation, and of the measured parameters. *No effort is made in this report to duplicate such information.* A list of these reports is included in section 3.

2. MEASUREMENTS OVERVIEW

Table 1 outlines the principal participants, platforms, measurements, and data base of the field program of Project PEPE-NEROS, 1980. It also identifies the form of the data archived corresponding to each platform. This section outlines the measurement platforms and the overall field experimental missions. The reader is also referred to two other overviews of the PEPE-NEROS program (Vaughan,1985; Vaughan et. al., 1982).

2.1 Measurement Platforms

Three principal chemical sampling aircraft were deployed: CHEM-I by EMI, CHEM-II by AV, and the SCOUT by SRI. The aircraft were rather similarly instrumented, with some defferences. In general, they were equipped to make continuous measurements of trace gases (SO_2,O_3,NO/NO_x), aerosol parameters (b_{scat}, aerosol charge, Aitken nuclei count, particulate sulfur, sulfuric acid), meteorological parameters (ambient and dew point temperature, turbulence), and navigational parameters. In addition, each aircraft collected time-integrated filter samples, subsequently analyzed for sulfate, nitrate (nitric acid as well as particulate nitrate), and other species, and also whole air samples for subsequent analysis for detailed hydrocarbon speciation. The EMI aircraft was also equipped with an electrical aerosol analyzer and optical counters for aerosol size distribution analysis. A helicopter (the CHOPPER) maintained and operated by TVA, was instrumented to measure SO_2, NO/NO_x, O_3, b_{scat}, and ambient and dew point temperatures, and was deployed exclusively to make a large number of vertical soundings in the boundary layer, generally in the vicinity of the Columbus metropolitan area. It was also equipped to collect air samples for detailed hydrocarbon analysis. An airborne, downward-looking lidar (EPA-Las Vegas) flew many missions within a mesoscale range from Columbus, and made many remote-sensing measurements of the light-scattering aerosol distribution in the urban plume. Another aircraft (NOAA-Boulder) was equipped to make detailed measurements of turbulent fluctuations of the wind field, pressure field, temperature field, and moisture field, as well as very fast response measurements of ozone. Finally, an aircraft (NCAR) also made measurements in clouds, of cloud water content and chemistry, near the Ohio-Pennsylvania border. The measurements by the NCAR aircraft were not co-ordinated with the daily missions of PEPE-NEROS.

A wide array of ground measurements were also made, of air quality and meteorological parameters. Ground stations at fixed sites in the vicinity of Columbus made measurements of ozone, NO/NO_x, hydrocarbon species, aldehydes, H_2O_2, PAN, etc. (EMI, EPA, Harvey Mudd). Gaseous and aerosol dry deposition measurements were also made at a fixed ground station (ANL). Vertical ozone profiles above ground were measured by a tethered balloon (NASA). At least two mobile ground platforms (U. Minnesota and EMI) also made a variety of air quality (gaseous and aerosol, including detailed aerosol size distribution) and meteorological measurements. A wide variety of meteorological support measurements were made from a number of fixed and mobile platforms (AV, BERTIN). These included measurements of the ground level and boundary layer mean wind, pressure, temperature and moisture fields and insolation. Boundary layer light-scattering aerosol distribution and dynamics were monitored by the ground-based, mobile SRI lidar system. The boundary layer mesoscale and regional transport were also monitored by the use of tetroons equipped with transponders, and tracked either by mobile radars or by the FAA (EPA/SRI, NOAA-Idaho Falls).

There were some additional activities which were more specifically focused on regional scale measurements and information. NASA's efforts in the study included deployment of three aircraft, two making remote-sensing measurements in long range flights well outside the mixing layer, and looking down into the mixing layer. The Electra was equipped with a UVDIAL lidar system, and an HRSL lidar system, both of which are capable of providing vertical profiles of aerosol backscatter. The UVDIAL is an ultraviolet differential absorption lidar system and also measures vertical ozone profiles. The HRSL is a high resolution spectral lidar system. Another aircraft, the JPL Queen Air, was equipped with a laser absorption spectrometer (LAS) which provided integrated vertical ozone burdens between flight altitude and the ground. The Electra and Queen Air data provide information on the aerosol and ozone spatial distribution, as well as mixing height information on a regional scale. In addition, the Electra observed, on numerous occasions, elevated haze layers extending over regional scales, at elevations even exceeding 5 km. The Electra flew 16 such long range missions between the East coast and the Midwest regions. In addition to the above aircraft, NASA also fielded a chemical sampling aircraft which made in-situ measurements similar to those made by the EMI, AV and SRI aircraft. The primary objective of this aircraft was to make vertical soundings underneath the Electra or Queen Air flight paths at pre-selected rendezvous sites to provide *in-situ* data for correlative purposes. NASA also made multi-wavelengh photometer/transmissometer measurements of optical depths at 8 fixed sites in the northeastern U.S. quadrant, including one site near Columbus, Ohio.

The Canadian Atmospheric Environment Service (AES-Canada) also participated by making measurements in Ontario, along the U.S. border, during the field-study period. They flew a chemical aircraft, collected filter samples at 3 fixed ground sites, and made upper air meteorological soundings.

2.2 The Daily Experimental Missions

Figure 1 summarizes the deployment of the measurement platforms for the period July 10 to August 15, 1980. The days prior to July 15 were mostly test days, and are not a part of the formal PEPE-NEROS data base. From the point of view of chemical characterization of polluted urban plumes and regional haze, the data of the three primary sampling aircraft (EMI/CHEM I, AV/CHEM II, and SRI/SCOUT) are of critical importance. These aircraft were not fully operational during the first week of the field program. A summary of the daily missions of these three aircraft is presented in Table 2. Urban plume measurements were made on at least 9 different days between July 20 and August 15. On some of these days, different aircraft were making measurements in different urban plumes. The availability of data taken in a number of different urban plumes gives the data base an added variety.

Table 1.
PEPE/NEROS
DATA BASE STATUS REPORT

WU/EPA Special Studies Data Center
Washington University
St. Louis, Missouri

Page 1 of 6

Data Classification	Organization	Platform (File I.D.)	Data Description		Archive Form & Availability	
AIRBORNE PLATFORM (In-situ measurements)	EMI	Chem I Chemical Aircraft	12 flight days		Mag tape	A (*)
			Continuous data:	Time, location, altitude, temp, dew point	Data volume (D.V.)	A
		(EMIAxx)	(Every 2 sec.)	SO_2, NO/NO_x, O_3, B_{scat}, ANC, SO_4, H_2SO_4;	Overview volume	A
			Intermittent:	Aerosol size distribution: EAA, OPC (Knollenberg),	Not processed	NA
		(HCEMI)		Detailed hydrocarbons (Grab samples),	Mag tape	A
				Sulfates, nitrates, ammonium, ammonia, nitric acid (Filter samples)	Tabulation in D.V.	A
	AV	Chem II Chemical Aircraft	14 flight days		Mag tape	A
			Continuous:	Time, location, altitude, temp, dew	Data volume	A
		(AVNAxx)	(Every 12 sec.)	point, turbulence, SO_2, NO/NO_x, O_3 B_{scat}, ANC, SO_4, H_2SO_4;	Overview volume	A
		(AVNAHC)	Intermittent:	Detailed hydrocarbons (Grab samples)	Mag tape	A
		(AVNAFS)		sulfate, nitrates (Filter samples)	Mag tape	A
	SRI	SCOUT Chemical Aircraft	13 flight days		Mag tape	A
			Continuous:	Time, location, altitude, temp, dew	Data volume	A
		(SRIAxx)	(Every sec.)	point, SO_2, O_3, B_{scat};	Overview volume	A
		(HCSRI)	Intermittent:	Detailed hydrocarbons (Grab samples)	Mag tape	A
				Sulfates, nitrates (Filter samples)	Tabulation in D.V.	A
	EPA/EMI	Chopper (TVA helicopter)	15 flight days		Mag tape	A
			Continuous:	Time, altitude, temp, dew point, NO/NO_x	Data volume	
		(CHOPxx)		O_3, B_{scat}.	Overview volume	A
		(HCCHOP)	Intermittent:	Detailed hydrocarbons (Grab samples)	Mag tape	A
	NASA-LaRC	Chem III Chemical Aircraft	16 correlative missions		Mag tape	A
			Continuous vertical profiles: Temp, dew point		Report	A
		(Correlative with UV-DIAL & LAS)	Average vertical profiles: Ozone, B_{scat} heated (average of multiple co-located profiles)			
		CORAVS,CRTAVS (UV-DIAL) CCLAVS,CLTAVS (LAS)				

(*) A = Data available in central data bank; mag tape date are in GDDB.
NA = Data not in central data bank.

Table 1. PEPE/NEROS DATA BASE STATUS REPORT (continued)

Data Classification	Organization	Platform (File I.D.)	Data Description	Archive Form & Availability	
	NCAR	Cloud Chemistry Aircraft	10 days in N.E. US, 3 days in Ohio Parameters: Temp, dew point, WS, WD, (gas phase SO_2, NO, NO_2, O_3, NH_3, HNO_3, H_2O_2, HCL), (Aerosol NH_4^+, CA^{++}, Mg^{++}, Na^+, $SO_4^=$, NH_3^-, CL^-, NO_2^-), (Rain/cloud water NH_4^+, CA^{++}, Mg^{++}, K^+, Na^+, pH, conductivity, $SO_4^=$, NO_3^-, Cl^-, $PO_4^=$)	Partial tabulated data for 8/13/80 only Other days	A
	NOAA-Boulder	Turbulence Aircraft	15 flight days (Aug. 4-25, 1980)		
			40 per sec.: u, v, w, water vapor, $T_{ambient}$,	Mag tape	NA
			$T_{virtual}$, O_3, Radiometer (upward-looking, downward-looking)	Mag tape	NA
			1 per sec.: Time, location, altitude, pressure airspeed, heading, wind speed (north, east)	Mag tape	NA
		(ERLUxx)(unfiltered)	Statistical averages for each "event" (aircraft traverse of variable duration) Time, altitude, vertical eddy fluxes	Tabulated in Data volume	A
		(ERLUxx)(filtered)	$(\overline{'w'}, \overline{T'w'}, \overline{u'w'}, \overline{O_3'w'})$	(also mag tape)	A
	AES-Canada	Chemical Aircraft	9 flight days (20 sec. averages): Time, location, altitude, temp, RH, SO_2, NO/NO_x, O_3, B_{scat}	Mag tape	NA

Table 1. PEPE/NEROS DATA BASE STATUS REPORT (continued)

Data Classification	Organization	Platform (File I.D.)	Data Description	Archive Form & Availability	
AIRBORNE PLATFORM (Remote-sensing measurements)	EPA-LV	Lidar Aircraft	14 flight missions Detailed data: Time, location, aircraft ground speed, ground temp, dual frequency lidar return data at 20 ft intervals (~ 10,000 ft to ground level)	Mag tapes	NA
			Flight maps, photographic data plots	Data volume	A
	NASA-LaRC	Lidar Aircraft (Electra) UV-DIAL (Differential Absorption Lidar)	14 flight missions (lidars looking down from ~ 10,000 ft) 5 min. averages: Time, location, altitude, aerosol mixed layer height (mean & s.d.), lowest cloud condensation level, maximum cloud height, top of upper stable layer	Mag tape	A
		(UVDAxx) (UV03VS.MDD) Down-looking lidar systems	1 min. average: Vertical profile of ozone	Mag tape	A
			1 sec. data: (~ 100 m travel) Time, location, aerosol return signals at vertical intervals of about 15 m	Mag tapes (8)	A
			Data plots: Vertical profiles of aerosol and ozone	Data Report	A
		HRSL (High Resolution Spectral Lidar) (HRLAxx)	2 min. averages: Time, aerosol layer height (mean & s.d.) 15 min. averages: Time, vertical profile of aerosol backscatter, ratio of particulate to molecular backscatter, aerosol optical depth	Mag tape	A
	NASA/JPL LAS (Laser Absorption Spectrometer)	Lidar Aircraft (Queen Aire) (LASA01)	6 flight missions (correlative with Chem III) Time, location, altitude, vertically-integrated ozone burden under 15-30 km flight legs	Mag tape Report	A A
AIRBORNE PLATFORMS (Tetroons)	NOAA-ERL	Small tetroons and pilot balloons tracked by mobile radars (ARLxxx)	110 releases tracked Date, time, location, tetroon height, ground elevation, WS, WD	Mag tape	A
	EPA/SRI/FAA	Large tetroons tracked by FAA fixed radars (EPAOxx)	13 releases tracked Date, time, location, tetroon height	Mag tape	A

Table 1. PEPE/NEROS DATA BASE STATUS REPORT (continued)

Data Classification	Organization	Platform (File I.D.)	Data Description		Archive Form & Availability	
GROUND PLATFORM (In-situ mobile)	EMI	AQML (Mobile Lab) (EMIGxx)	14 days Continuous: (10 sec. intervals)	Time, location, SO_2, NO/NO_x, O_3, B_{scat}, Aerosol sulfate, COSPEC-SO_2 (integrated overhead burden) Grab samples: Detailed HC Filter samples: Sulfate, nitrate	Mag tape	A
	U. MINN.	UMML (Mobile Lab) UMMH (Mobile Home)	13 days Continuous data: (1 min. averages)	Time, location, temp, dew point, RH UV and broadband radiation, WS, WD, SO_2, NO/NO_x, O_3, ANC, B_{scat}, EAA-RH EAA-B_{scat},	Mag tape Report/Data Volume	A A
		Most U. MINN. data were collected in the stationary mode at the Croton site a) (UMCGxx)	a) Cont. data summary: (as above) (Event averages)		Mag tape	A
		b) (UMSDxx)	b) Particulate data:	Aerosol size distribution data for each bag fill (based on EAA and ROYCO-OPC).	Mag tape	A
		c) (UMPGxx)	c) Part. data summary:	Derived aerosol parameters (e.g. aerosol volume distribution, mass mean diameter, etc.)	Mag tape	A
GROUND PLATFORM (In-situ stationary)	EMI/EPA	1. Ft. Hayes Monitoring Station (HCFTHS)	NO/NO_x, O_3, UV, Total radiation, NMHC, ald.		Mag tape	A
		2. N. Albany - WCVO Monitoring Station (HCWCVO)	NO/NO_x, O_3		Mag tape	A
		3. GC Lab at W. Jefferson (HCWJEFF)	NO/NO_x, O_3, CO, PAN, ald, NMHC (detailed speciation)		Mag tape Report	A A
	Harvey Mudd College	1. Special Photochem. Lab. W. Jefferson (MUDDxx)	High sensitivity NO/NO_x, UV		Mag tape	A
		2. Special Photochem. Lab., N. Albany (MUDDxx)	H_2O_2, HCHO, UV		Mag tape	A

Table 1. PEPE/NEROS DATA BASE STATUS REPORT (continued)

WU/EPA Special Studies Data Center
Washington University
St. Louis, Missouri

Page 5 of 6

Data Classification	Organization	Platform (File I.D.)	Data Description	Archive Form & Availability	
GROUND PLATFORM (In-situ stationary)	EPA/U. of S. Fla.	1. Croton site 2. EMI Chem I	NH_3, HNO_3 and aerosol NH_4^+, NO_3^- -same-	Report In EMI Data Volume	A
	ANL	Croton site (ANLGxx)	Surface flux measurements on 14 days Time, temp, dew point, WS, WD, Radiation, U_*, H_0 (sensible heat flux), O_3, O_3 deposition flux	Mag tape Report	A A
	AES	Ground filter packs	6h averages at 3 sites: Time, location, SO_2, HNO_3, aerosol sulfate	Report	A
GROUND PLATFORMS (vertical soundings	NASA/LaRC	Small tethered balloon	81 launches (ascents & descents) at Croton, OH	Mag tape	A
		"Red Guppy", $4 m^3$ (STBGVS.MDD)	Vertical profile data: Altitude, temp, RH, WS, WD, O_3 up to 900 m	Report	A
		Large tethered balloon	89 launches (ascents & descents) at Aberdeen, MD	Mag tape	A
		"Great White", $100 m^3$ (LTBGxx)	Vertical profile data: Altitude, temp, dew point, WS, WD, O_3 up to 1500 m	Report	A
	AV	Sodar/Minisonde (AVPI01,02) (AVAS01,02) (AVNG03,04)	Vertical profiles of WS, WD, T, RH	Mag tape	A
	BERTIN-CIE	3-D Sodar (BERTIN.MDD)	Vertical profiles of ECHO, WS, WD, W (vertical wind)	Mag tape	A
	AES, Canada	Minisonde	Vertical profiles of WS, WD, T, RH	Mag tape	NA
GROUND PLATFORMS (Remote-sensing measurements)	SRI	Mark-IX Ground Lidar (Stationary and mobile modes)	Lidar aerosol backscatter data - vertical profiles Boundary layer aerosol distribution - time-height plane profiles	Mag tapes Photo Album	NA A
	AES, Canada	Ground Lidar	11 days, 54 profiles: Time, location, aerosol profile	Report	A
	NASA-JPL	MARS Microwave Atmospheric Remote Sensor (RMSG01) (PMRG01)	12 missions: vertical profiles of temp, dew point 5 missions: precipitable water vapor column	Mag tape Report	A A
	NASA-GSFC	Sun Photometer Network (SP4G01) Sun Transmissometer (SP8G01)	9 stations across eastern U.S.: 4-channel aerosol optical depth At GSFC: 8-channel aerosol optical depth	Mag tape & Report	A A

Table 1. PEPE/NEROS DATA BASE STATUS REPORT (continued)

Data Classification	Organization	Platform (File I.D.)	Data Description	Archive Form & Availability	
SYNOPTIC WEATHER DATA	SRI	PEPE/NEROS Weather Center	Meteorological Overview: Synoptic weather description with emphasis on winds, 3-D air parcel trajectories, cloudiness and precipitation; Original Weather Center archives	Overview Volume	A
				Original Material	NA
	MESONET	-	Synoptic Data Archive NAFAX analyses and forecast products; DIFAX products; NWS numerical forecasts; Computer Surface Data Plots; 24-h NWS Surface & Radiosonde Data Listings; GOES satellite data	To be maintained and distributed by MESONET (catalog of available products is in PEPE Central Data Bank)	
	WU (Washington University)	PEPE/NEROS Data Center	Synoptic weather plots based on NWS Surface Weather Obs. (Wind vectors, contours of pressure, temp, dew point, B_{ext})	Plots	A
			Mission Control Logs Chem I, Chem II, SCOUT Data Volumes	Original material from field study period	A
		UAWIND, UATEMP	NWS Upper Air and Surface Weather Observation Data	Mag tape	A
QUALITY ASSURANCE REPORTS	RTI/PEDCO	Audit Lab	PEPE/NEROS Project Performance Audits (External)	Report	A
	AV	All contractor team moving platforms	Project QA report	Report	A
DATA REVIEW	WU	-	Copies of viewgraphs presented at the 1st PEPE/NEROS Data Review Meeting, Quail Roost, NC; Sept. 1981	Viewgraph copies	A
	AV	-	Descriptive Analysis of Urban Plume Missions	Report	A
	SRI	-	Descriptive Analysis of Prevailing Synoptic Conditions	Report	A

In terms of PEPE occurrences during the July 14 - August 15 field- study period, there was not a single episode of intense and persistent regional haziness. There were two periods, however, which may be characterized as moderate PEPE periods --- (July 26 - August 1), and (August 8-11). The PEPE in the first period was initiated by the accumulation, in the northeastern region, of stagnant Ohio River valley pollution during the passage of a continental polar high pressure cell, and further augmented by inflow of pollution from the East Central region on the back side of this high as it moved to and off the New England coast. The PEPE core was blown off to the east coast in the westerly flow above a Bermuda high pressure cell which briefly penetrated the southeastern U.S. region at the end of July. This episode was certainly the more intense of the two PEPEs during the field study period. Unfortunately, it was not recognized as such until it was being blown off to the east, and the PEPE chase of August 1 was the only planned PEPE activity during the episode. Locally in the Columbus area, July 26 was the haziest day of the study period, and a short range urban plume study was done that day. Local rain showers led to no mission on the 27th. A substantial urban plume study was conducted on the 30th and the 31st, downwind of Columbus.

The second PEPE (Figure 2) was associated with a Bermuda high. A strong high pressure cell from the southeast occupied much of the eastern U.S. on August 6. The southeastern U.S. region experienced considerable stagnation for the next five days, causing a slow build up of a somewhat hazy air mass in the southwesterly flow on the back side of this high (Texas to Ohio) by August 8. This combined with another region of haziness formed in the northeast by the southwesterly transport of the Ohio River valley emissions. This weak "blob" floated around over the eastern U.S. until August 11, when the flow in the wake of the receding high, and around a low pressure cell in the L. Michigan area, caused the transport of the "blob" off to the east coast. During this period (August 6-11), a full-scale PEPE deployment was in effect. It started with probes into the stagnant region in Tennessee as early as August 6 before any build up of a blob there. Measurements during the subsequent days were made in both segments of the blob (the northeastern as well as the southern), and finally the blob was followed out to the east coast on August 11 during its exit from the region. Though this episode was not intense, a thorough case study of it may be very informative.

Reproduced from best available copy.

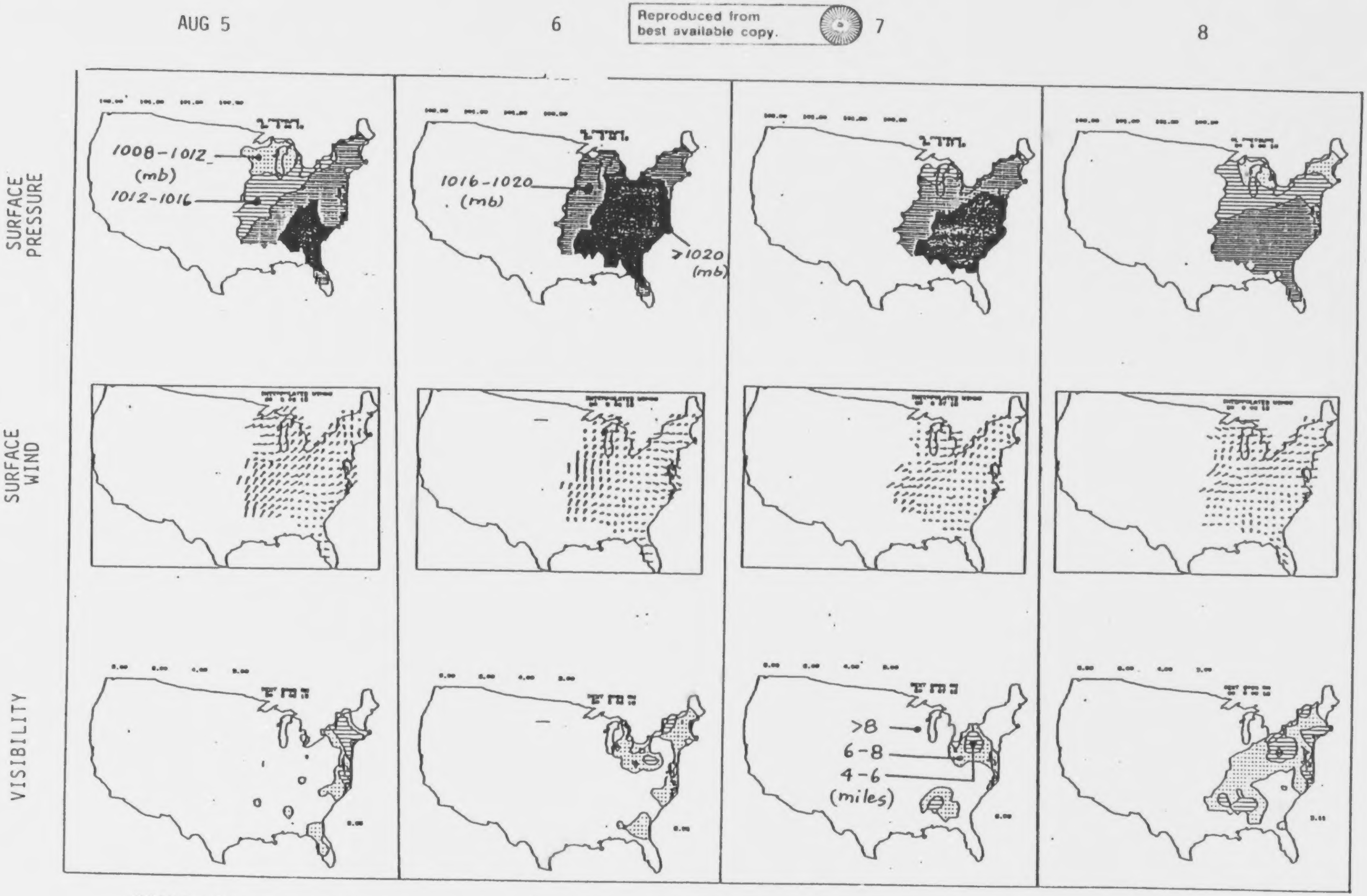
AUG 5
6
7
8
SURFACE PRESSURE
SURFACE WIND
VISIBILITY
1008-1012 (mb)
1012-1016
1016-1020 (mb)
>1020 (mb)
>8
6-8
4-6
(miles)

FIGURE 2: Plots of the Pressure, Surface Wind, and Visibility Fields in the Eastern United States at Noon during the Period August 5-12 (inclusive), 1980. The Plots depict the Extent and Dynamics of a Weak PEPE Episode. . . (continued on next page)

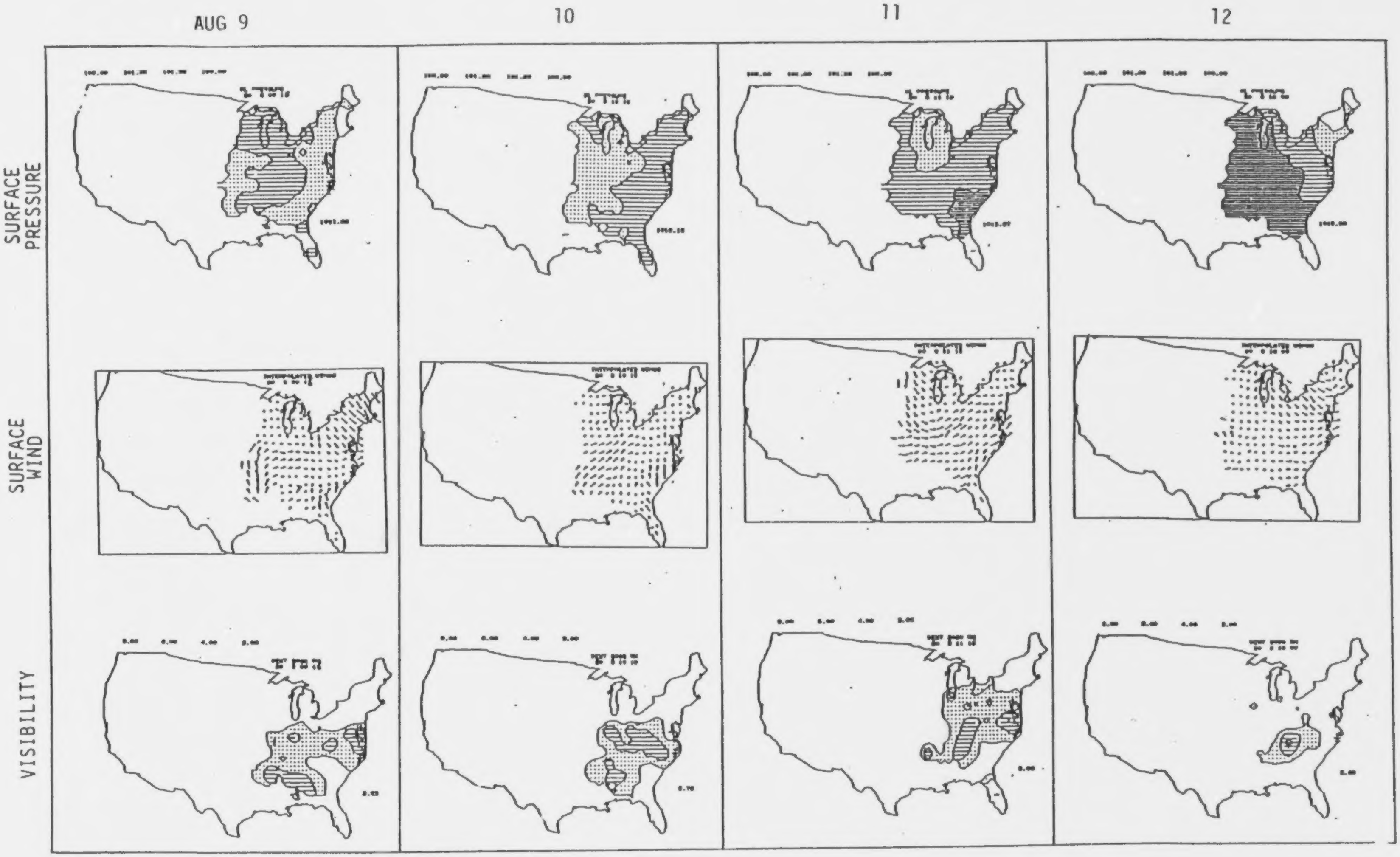
AUG 9
10
11
12
SURFACE PRESSURE
SURFACE WIND
VISIBILITY

FIGURE 2 (continued)

3. DATA BASE OVERVIEW

3.1 Outline of the Data Base

The overall PEPE-NEROS data base is composed as follows:

1. The Field Data Base

- Raw and partially processed data of the primary sampling aircraft (CHEM I, II, SCOUT), original flight logs and field data plots for these aircraft.

- Original real-time logs of Mission Control Center communications with field measurement platforms.

- National visibility contour plots and regional model plots generated on-site by CAPITA (Washington University), based on currently available NWS surface weather data.

2. The Original Data Base

- The "clean" reduced data on magtapes as submitted to the Data Manager by individual data collecting organizations.

3. The Intermediate Data Base

- Reformatted version (direct access format) of the Original Data Base, most suitable for easy graphical display with the Data Center display/edit software package used in the field.

4. The General Distribution Data Base (GDDB)

- The condensed, repackaged, standardized format final data base on magtapes, intended for general distribution to potential users of the data base.

5. The Hard Copy Data Base

- Reports, etc. prepared by data collecting organizations to document the individual measurement platforms, instrumentation, measured parameters,quality assurance, data processing and validation, etc.

6. The MESOMET Synoptic Meteorological Data Base

- This compilation of routinely monitored synoptic meteorological data by MESOMET, Inc. is described further in the next section.

3.2 MESOMET Synoptic Meteorology Archive

The primary responsibility of MESOMET, Inc. was the archival of the NAFAX meteorological data, the GOES UNIFAX imagery, and the McIDAS analyses for the period of the PEPE-NEROS field program. The MESOMET archive is detailed for each day of the study in a two-volume catalog available through Dr. Francis Pooler of EPA-ASRL.

There are six categories of the archived data, as follows:

1. NAFAX analyses and forecast products
2. DIFAX products
3. NWS numerical forecasts (trajectory, pressure, temperature, humidity, and precipitation)
4. Computer plots of NWS surface data
5. 24-hour NWS data listings
6. NWS radiosonde data listings.

The data archive catalog shows example data listings and plots, and specifically identifies what products are available for each day of the period 14 July - 15 August 1980.

3.3 The Hard Copy Data Base

Table 3 lists the reports, publications, and other hard copy materials pertinent to the PEPE-NEROS data base. The list is broken up by a) Contractor team, b) NASA, c) Washington University, d) Other participants. Detailed information concerning the participation, platform, and measurements of each group is contained in these reports.

3.4 Availability of the PEPE-NEROS Data Base

All components of the PEPE-NEROS data base, except the MESOMET data archive, will be archived at the WU/EPA Special Studies Data Center at Washington University for the foreseeable future. The GDDB and the Hard Copy Data Base are also resident at EPA in the custody of Dr. Francis Pooler. Future distributions of the data base will be handled directly by Dr. Pooler at the following address:

Dr. Francis Pooler
Meteorology and Assessment Div.
ASRL, MD-80
EPA
Research Triangle Park, NC 27711
Tel: (919) 541-1334

Any questions concerning the preparation and archival of the data base may be referred to:

Professor Noor V. Gillani
Mechanical Engineering Department
Campus Box 1185
Washington University
St. Louis, MO 63130

Tel: (314) 889-6079

TABLE 3.

PEPE/NEROS 1980
HARD COPY ARCHIVE
May 1985

WU/EPA Special Studies Data Center
Washington University
St. Louis, MO

Reporting Organization	Title/Date/Description of Document
	A. CONTRACTOR TEAM
1. EMI	"Transport of Pollutants in Plumes and PEPEs", EMI Final Report for EPA Contract No. 68-02-3411, 1984. (7 Appendices, A through G).
1.A EMI	Appendix A : "CHEM-I Data Volume", W. Vaughan et al. (EMI), Mar. 1983
1.B AV	Appendix B : "CHEM-II Data Volume", W.C. Brick et al. (AV), June 1983
1.C SRI	Appendix C : "SCOUT Data Volume", B. Cantrell et al. (SRI), Sept. 1983
1.D EMI	Appendix D : "CHOPPER Data Volume", W. Vaughan et al. (EMI), Aug. 1983
1.E EMI	Appendix E : "MOVING LAB Data Volume", W. Vaughan et al. (EMI) May 1983
1.F SRI	Appendix F : "Surface-based LIDAR Measurements", E.E.Uthe (SRI), June 1983
1.G AV	Appendix G : "SODAR-1 and SODAR-2 Data Volume", W. Brick et al., (AV), July 1983
2. Vaughan W.M., Chan M., Cantrell B. and Pooler F.	"A Study of Persistent Elevated Pollution Episodes in the Northeastern U.S." Bulletin American Meteorological Society 63(3), 258-266, 1982
3. EMI/AV/SRI	Descriptive Analyses of Meterological Data Base for the 1980 Summer PEPE/NEROS Experiment A. Urban Plume Priority I Mission Days (July 30,31; Aug. 2,4,12,13) B. Regional Priority I Mission Days (Aug. 1,7,8,9,10,11)
4. SRI	Report on FAA Tetroon Tracking Task, Mar. 1981 (Large Tetroons)
5. EMI	PEPE/NEROS Project: Fixed Station Data, Gary Klauber, Dec. 1980
	B. NASA
1. NASA/LaRC	NASA Participation in the 1980 PEPE/NEROS Project: Operational Aspects G.L. Maddrea, Jr. and R.J. Bendura, NASA-TM 83170, Sept. 1981
2. "	NASA Participation in the 1980 PEPE/NEROS Project: Data Archive D.A. Brewer, et al., NASA-TM 83189, July 1982
3. "	An Airborne Lidar System for Ozone and Aerosol Profiling in the Troposphere and in the Lower Stratosphere. E.V. Browell, et al., Proceedings of the Quadrennial International Ozone Symposium, Vol. 1, J. London (ed.), Boulder, CO, Aug. 1980
4. "	UV-DIAL Aerosol Data from 1980 PEPE/NEROS Field Experiment (Data Volume) E.V. Browell, et al. (1982)
5. "	1980 PEPE/NEROS DIAL Ozone profiles (Data Volume) E.V. Browell et al. (1982)
6. "	UV-DIAL Mixing Height, Cloud, and Stable Layer Data Summary, E.V. Browell and S.T. Shipley
7. "	In-situ Correlative Measurements for the UV-DIAL Absorption Lidar and the HSRL Air Quality Remote Sensor: 1980 PEPE/NEROS Program G.L. Gregory, et al., NASA-TM 83107, April 1981
8. "	Tethered-balloon Measurements fo Meteorological Variables and Aerosols R.J. Sentell, et. al., NASA-TM-X-73999, Sci. 1976
9. JPL	Participation of the JPL Laser Absorption Spectrometer in the 1980 PEPE/NEROS Program in Columbus, Ohio. M.S. Schumate, JPL 715-84, Dec. 1980.
10. "	Microwave Atmospheric Remote Sensing of Vertical Temperature Profiles during the 1980 PEPE/NEROS Experiment, B.L. Gary, Final Report to EPA, JPL 5030-498, May 1981.
11. U. of Miami	Aerosol Optical Depth Measurements in Pollution Eposides, J.M. Prospero, et al., Rosentiel School of Marine and Atmospheric Science, U. of Miami, Final Report to NASA, January 1981
12. NASA/LaRC	NASA PEPE/NEROS Data Review Meeting, March 1981, (Copies of Handouts and Viewgraphs)

... continued

C. WASHINGTON UNIVERSITY

I. Materials Generated During PEPE/NEROS Field Study (July 15-Aug. 15, 1980)

1. Mission Control Logs - a) Aircraft Communications
   - b) Surface Communications

2. NWS Surface Weather Data - a) Data Listings
   - b) Visibility contour plots and surface wind plots

3. Real Time Monte Carlo Model Prediction Plots

4. Aircraft Data Volumes - a) EMI Chem 1, Vols 1,2,3,4
   - b) AV Chem 2, Vols 1,2,3,4
   - c) SRI SCOUT, Vols 1,2
   - d) EPA CHOPPER

II. Other Materials

1. PEPE/NEROS Data Review Meeting (Quail Roost, Sept. 1981), Record of Proceedings (Handouts and Viewgraph copies).

2. "Eastern U.S. Maps of Meteorological Parameters Pertinent to Regional Air Pollution Episodes", J. Holloway et al. (Sept. 1981)

3. "Concentration profiles of sulfuric acid aerosol in elevated plumes and haze polls over the eastern U.S." W.G. Cobourn et al., CAPITA Report (1981)

D. OTHER PARTICIPANTS

1.	EPA-LV	Airborne Downward-looking Lidar Measurements During PEPE/NEROS, Data Volume, J.L. McElroy et al., EPA/EMSL Ts-AMD-82026, Dec. 1981
2.	EPA-RIP/NOAA-ARL	PEPE Tetroon Flight Paths (Trajectory Plots of Small Tetroons), Sept. 1981.
3.	NOAA-ERL	NEROS II Airborne Turbulence Measurements, Statistical Data Summary R.E. McGavin and K.D. Hanson, NOAA-ERL, Boulder, Co., November 1981.
4.	U. Minn.	University of Minnesota - Mobile Laboratory Data Report: PEPE/NEROS Study, D.J. Rader, et al. Particle Technology Laboratory Publ. No. 443, Aug. 1981
5.	U. Minn.	"Droplet-Phase (Heterogeneous) and Gas-Phase (Homogeneous) Contributions to Secondary Ambient Aerosol Formation as Functions of Relative Humidity", P.H. McMurry and J.C. Wilson, Journal of Geophysical Research, 88(C9), 5101-5108, June 1983.
6.	Harvey Mudd	PEPE/NEROS Data Report, WCVO Site, G.L. Kok, Harvey Mudd College, (1981)
7.	U. of S. Florida	Gaseous and Particulate Ammonia and Nitric Acid in the Columbus, Ohio Area, Summer 1980, R.S. Braman and T.J. Shelley, Draft Report to EPA-ESRL (W. McClenny, P.O.), Oct. 1980
8.	MESOMET	PEPE/NEROS-80 General Data Archive Catalog, Vols. 1&2. R.H. Calby and W.A. Lyons (1981).
9.	"	Meteorological Conditions and Episode Morphology for PEPE/NEROS 1980, W.A. Lyons and R.H. Calby, Final Report to EPA (1983)
10.	"	Impact of Mesoscale Convective Precipitation Systems on Regional Visibility and Ozone Distributions, W.A. Lyons and R.H. Calby, Joint Report to EPA and NASA (1983) - contains a case study from PEPE period.
11.	"	"Air quality applications of meteorological satellite data", W.A. Lyons and R.H. Calby, Paper presented at 75th Annual APCA Meeting, New Orleans, June 1982. (contains correlations of satellite and PEPE ground data).
12.	RTI	Performance Audits of the NEROS/PEPE Sites, F.K. Arey, et al., Research Triangle Institute, RTI/1808/98, Dec. 1980 (Rev. March 1981).
13.	REMTECH	EPA PEPE/NEROS Field Study, Processing of the REMTECH Doppler Sodar, P. Huguet, REMTECH (formerly BERTIN), DT 82.109, Paris, France, Dec. 1982
14.	AES-Canada	Appendix (Data Volume) to: Lidar Profiles of Vertical Aerosol Structure Obtained During the PEPE Project, R.M. Hoff and F.A. Froude, Atmospheric Environment Service, AQRB-81-024-T, Environment Canada, Toronto, Canada.

4. REFERENCES

Arey F.K, R.C. Shores and R.W. Murdoch (1980). Performance Audits of the NEROS/PEPE Sites, RTI/1808/98, Report of Research Triangle Institute to EPA for contract No. 68/02/3222, March 1981.

Pettus K. and I. Tombach (1985). Quality Assurance Program for Moving Platforms in PEPE/NEROS, AV-FR-83/516, Final Report of Aerovironment, Inc. to EPA for contract No. 68/02/3411, August 1985.

Vaughan W.M., M. Chan, B. Cantrell, and F. Pooler (1982). A Study of Persistent Eleveated Pollution Episodes in the Northeastern U.S., Bulletin AMS 63(3), 258-266, 1982.

Vaughan W.M. (1985). Transport of Pollutants in Plumes and PEPEs, EPA/600/3-85/033, July 1985.

PART II. GENERAL DISTRIBUTION DATA BASE

1. INTRODUCTION

The General Distribution Data Base (GDDB) of Project PEPE-NEROS is the final form of the PEPE-NEROS data base which will normally be available easily and in its entirety to potential users of the data base. It consists of the final reduced version of the data base, and is expected to be complete and adequate for the vast majority of users. A very limited user community may need to use the unreduced data of the EPA-LV and NASA aircraft lidars (5 Hz) and of the NOAA-ERL turbulence aircraft (40 Hz) for some special projects. These detailed data are not included in the GDDB, and may be obtained by specific request directly from the data collecting agencies. Substantially reduced versions of the data of the NASA lidars (UV-DIAL and HSRL) and of the NOAA turbulence aircraft are included in the GDDB. The EPA lidar data are normally available in the form of a hard-copy photographic album, and are not included in any form in the GDDB.

At this point, the reader is referred back to Table 1 in **Part I** which contains an overall summary of the data base of PEPE-NEROS. The data identified in that Table as being available on magtapes are the contents of the GDDB.

The bulk of the data in this GDDB are grouped by day. For some platforms, the daily data sets were extremely small. Such data sets were retained in single data files covering the full field study period (July 15 - August 15, 1980). These data files are collectively called "the monthly data base", as distinguished from "the daily data base" which comprises all the data files, grouped by day, for the 32 days of the period 15 July -15 August (inclusive).

The entire GDDB is in a highly standardized form. All data files except those containing routine surface and upper air data of the National Weather Service are presented in one or the other of the two standard STATE formats. The STATE formats are identical to those of the GDDBs of EPA's previous projects MISTT and Tennessee Plume Study, and the Joint EPA-EPRI Project CWPS (Cold Weather Plume Study). The two STATE formats are STATE-20 and STATE-VS. All data of a time series type (the bulk of the GDDB of PEPE-NEROS) are cast in the STATE-20 format, and all data of vertical soundings (except NWS upper air data) are cast in the STATE-VS format. The formats are mostly self-documenting with header and comment records. Complete documentation of the two formats is included in Appendix C. The NWS data are left in their original formats, since many potential users of the GDDB of PEPE-NEROS presumably have used these data before and may have the necessary application software to use them. Complete documentations of these formats are also included here in Appendix C.

2. THE GDDB OF PEPE-NEROS

2.1 Composition of the GDDB

Individual data files in the GDDB typically contain some generic type of data collected in a specific measurement platform. The various generic data files within the daily data base are identified in Table 4. In the daily data base of any particular day, only a subset of these files may be present since not all platforms were operational every single day. Some platforms produced data on multiple files for the same day. The first file in each daily subset of the data base is a summary file which merely contains a list of the data files actually present in that day's data base, i.e., the particular subset of Table 4 as applicable to the given day. Each entry in this list pertains to a particular data file, and gives the file name and identifies the organization and platform collecting this data, the generic data type, and the file format.

Table 5 summarizes in matrix form the entire daily data base composition. Each row of the matrix gives all days for which a given type of data file exists, and each column of the matrix identifies all types of data files present for any given day. The matrix, however, does not contain information about multiple files of the same type for the same day. For complete and explicit description of the daily data base, a complete listing of the full contents of all daily summary files is presented in Table 6. Observe, for example, that for August 13, there are 3 SRI aircraft files, 3 NASA UV-DIAL files, 2 NASA HSRL files, and 10 NOAA small tetroon files (one for each tetroon flight).

Table 7 lists the type of files in the monthly data base. There is, of course, one of each of these in the GDDB.

2.2 GDDB Magtapes

The GDDB of PEPE-NEROS is packed into two 2400 ft, industry-standard, 1/2-inch magnetic tapes. Tape 1 contains 417 files comprising the daily data base for the period 7/15/80 to 8/7/80 (incl.), and tape 2 contains 178 files comprising the remainder of the daily data base for the period 8/8/80 to 8/15/80 (incl.), and 17 files comprising the monthly data base. Thus, there are a total of 417 files on tape 1 (24 daily summary files and 393 data files) and a total of 195 files on tape 2 (8 daily summary files and 187 data files). Complete tape scans showing sequentially the file number and size (in 1600 byte blocks) for both tapes are given at the end of this section, in Tables 8 and 9.
The two tapes are formatted as follows:

Tape: :	1/2-inch wide, 2400 ft long, ANSI-standard, 9-track
Label :	No label

Data Density : 1600 BPI
DataCoding : ASCII
Data Blocking : Fixed, 1600 bytes/block

2.3 GDDB File Formats

All data files except the NWS data files are in the STATE-20 (time-series data) or the STATE-VS (vertical soundings data) file formats. The NWS surface weather observation data are in the standard NWS-surface data format and the NWS upper air data are in the appropriate standard NWS-WIND or NWS-TEMP data formats. The daily summary files are in literal 80-character card image format.

The STATE formats are substantially self-documenting. The header records of STATE-20 identify the project, organization, platform collecting data, brief data description, time interval between successive data records (if regular), explicit FORTRAN format of the data record, list of parameters in each data record, and the corresponding engineering units and physical upper/lower bounds. Comment records following the data records generally elucidate measured parameter names (where necessary), and give any appropriate, but brief, when-where-how-why type of information. The STATE VS files similarly also give complete self-documentation (see the documentation also). In both STATE formats, the logical record length is 80 bytes throughout this GDDB.

Sample listings of contents of selected daily and monthly data files are given in Appendices A and B, respectively, as examples. Each file listing includes a selected number of records from the beginning and end of the file. The records at the beginning include all header records and the first few data records; the records from the end of the file include the last few data records and all the comment records. Appendix A gives such partial listing of a selection of files of 8/13/80. The selected files are identified by check marks in the summary listing identifying the files in the data base of 8/13/80, i.e. in the listing of SUMARY.813. Appendix B gives a similar listing of each generic type of file in the "monthly data base" contained at the end of tape 2.

Complete documentation of the STATE and NWS data file formats is given in Appendix C.

TABLE 4.

PEPE-NEROS 1980

TYPE OF FILES IN THE DAILY DATA BASE

FILENAME	ORGANIZATION	PLATFORM/DATA	FORMAT
SUMARY.MDD	-	LIST OF FILES FOR GIVEN DATA	
EMIAxx.MDD	EMI	CHEM I AIRCRAFT DATA	STATE-20
AVNAxx.MDD	AV	CHEM II AIRCRAFT DATA	STATE-20
SRIAXX.MDD	SRI	SCOUT AIRCRAFT DATA	STATE-20
CHOPXX.MDD	EPA/EMI	CHOPPER HELICOPTER DATA	STATE-20
LASA01.MDD	NASA/JPL	QUEEN AIR LAS DATA	STATE-20
UVDAxx.MDD	NASA-LARC	ELECTRA UV-DIAL DATA	STATE-20
HRLAxx.MDD	NASA-U.WIS	ELECTRA HSRL DATA	STATE-20
ERLUxx.MDD	NOAA-ERL	TURBULENCE AIRCRAFT (UNFILTERED)	STATE-20
ERLFxx.MDD	NOAA-ERL	TURBULENCE AIRCRAFT (FILTERED)	STATE-20
EMIGxx.MDD	EMI	AQML DATA	STATE-20
UMCGxx.MDD	U.MINN	UMHL CONTINUOUS (SUMMARY)	STATE-20
UMPGxx.MDD	U.MINN	UMHL PARTICULATE (SUMMARY)	STATE-20
UMSDxx.MDD	U.MINN	UMHL SIZE DISTRN (SUMMARY)	STATE-20
ANLGxx.MDD	ANL	SURFACE FLUX DATA	STATE-20
MUDDxx.MDD	H.MUDD	SPECIAL PHOTOCHEM LAB	STATE-20
SP8G01.MDD	NASA-GSFC	8-CH. RADIOMETER NETWORK	STATE-20
SP4G01.MDD	NASA-GSFC	4-CH. SUN-PHOTOMETER	STATE-20
RMSG01.MDD	NASA/JPL	MARS - REMOTE SPECTROMETER	STATE-20
PMRG01.MDD	NASA/JPL	MARS - PASSIVE SPECTROMETER	STATE-20
ARLxxx.MDD	NOAA-ARL	SMALL TETROON DATA	STATE-20
EPAOxx.MDD	EPA/FAA/SRI	LARGE TETROON DATA	STATE-20
STBGVS.MDD	NASA-LARC	SMALL TETHERED BALLOON DATA	STATE-VS
CORAVS.MDD	NASA-LaRC	CHEM III B_{SCAT}, O_3 CORRELATIVE WITH UVDIAL	STATE-VS
CRTAVS.MDD	NASA-LaRC	CHEM III TEMP CORRELATIVE WITH UVDIAL	STATE-VS
CCLAVS.MDD	NASA-LaRC	CHEM III B_{SCAT}, O_3 CORRELATIVE WITH LAS	STATE-VS
CLTAVS.MDD	NASA-LaRC	CHEM III TEMP CORRELATIVE WITH LAS	STATE-VS
AVPI01.MDD	AV	SODAR 1 PIBAL DATA	STATE-VS
AVPI02.MDD	AV	SODAR 2 PIBAL DATA	STATE-VS
AVAS01.MDD	AV	SODAR 1 AIRSONDE DATA	STATE-VS
AVAS02.MDD	AV	SODAR 2 AIRSONDE DATA	STATE-VS
BERTIN.MDD	BERTIN	3-D SODAR DATA	STATE-VS
UAWIND.MDD	NWS	UPPER AIR WIND DATA	NWS-WIND
UATEMP.MDD	NWS	UPPER AIR TEMP DATA	NWS-TEMP

Notes:

xx,xxx = variable numerical identifiers of specific missions

MDD = Date (Month,Day), e.g. MDD=724 indicates July 24.

TABLE 5.

PEPE-NEROS 1980

SUMMARY OF DAILY DATA BASE

DATA				JULY																	AUGUST														
TYPE	FORMAT	PLATFORM	FILE NAME	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
TIME-SERIES DATA	STATE-20	AIRCRAFT	EMIAxx																✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓		
			AVNAxx									✓	✓	✓					✓	✓	✓	✓		✓			✓	✓	✓	✓	✓	✓	✓		✓
			SRIAxx																✓	✓		✓		✓			✓	✓					✓		
			CHOPxx										✓	✓				✓	✓		✓	✓		✓	✓						✓	✓	✓		
			LASAxx	✓			✓		✓			✓																							
			UVDAxx				✓						✓	✓						✓		✓			✓		✓		✓	✓		✓	✓		
			HRLAxx										✓	✓						✓		✓			✓		✓		✓			✓	✓		
			ERLUxx																					✓	✓		✓	✓		✓	✓	✓	✓		
			ERLFxx																					✓	✓		✓	✓		✓	✓	✓	✓		
		SURFACE	EMIGxx										✓	✓	✓				✓	✓		✓		✓			✓	✓	✓	✓	✓	✓	✓		
			UMCGxx						✓				✓	✓		✓	✓				✓	✓		✓	✓	✓		✓					✓		
			UMPGxx						✓				✓	✓		✓	✓				✓	✓		✓	✓	✓		✓					✓		
			UMSDxx						✓				✓	✓		✓	✓				✓	✓		✓	✓	✓		✓					✓		
			ANLGxx			✓	✓	✓	✓	✓				✓	✓			✓	✓	✓	✓	✓		✓	✓										
			MUDDxx	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
			SP8Gxx												✓				✓	✓		✓			✓		✓	✓						✓	
			SP4Gxx	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓
			RMSGxx																							✓	✓	✓	✓	✓					
			PMRGxx																							✓	✓	✓	✓	✓					
		TET-ROON	ARLxxx		✓		✓		✓				✓	✓	✓			✓	✓	✓		✓		✓			✓	✓		✓	✓	✓	✓		
			EPAOxx		✓								✓	✓	✓				✓					✓	✓		✓	✓		✓	✓	✓	✓	✓	
VERTICAL SOUNDINGS	STATE-VS	AIRCRAFT	CORAVS										✓	✓						✓		✓			✓		✓					✓	✓		
			CRTAVS										✓	✓						✓		✓			✓		✓					✓	✓		
			CCLAVS	✓																															
			CLTAVS	✓																															
		GROUND LAUNCH	STBGVS		✓	✓	✓		✓	✓		✓	✓	✓	✓			✓	✓		✓			✓		✓	✓	✓	✓						
			AVPI01				✓		✓	✓			✓	✓					✓	✓	✓	✓		✓			✓	✓	✓	✓	✓	✓	✓		
			AVAS01				✓		✓	✓			✓	✓					✓	✓	✓	✓		✓			✓	✓	✓	✓	✓	✓	✓		
			AVPI02						✓	✓				✓	✓									✓			✓	✓		✓	✓				
			AVAS02						✓	✓				✓	✓									✓			✓	✓		✓	✓				
			BERTIN							✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
	NWS		UAWIND	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
			UATEMP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

TABLE 6

LISTING OF DAILY SUMMARY FILES (SUMARY.MDD)

SUMARY.715		LIST OF FILES FOR 7/15/80	
LASA.715	NASA/JPL	QUEEN AIR LAS DATA	STATE-20
MUDD.715	H.MUDD	SPECIAL PHOTOCHEM. LAB	STATE-20
SP4G01.715	NASA-GSFC	4-CH. SUN-PHOTOMETER	STATE-20
CCLAVS.715	NASA-LARC	CHEM III BSCAT,O3 CF. LAS	STATE-VS
CLTAVS.715	NASA-LARC	CHEM III TEMP CF. LAS	STATE-VS
UAWIND.715	NWS	UPPER AIR WIND DATA	NWS-WIND
UATEMP.715	NWS	UPPER AIR TEMP DATA	NWS-TEMP

SUMARY.716		LIST OF FILES FOR 7/16/80	
MUDD.716	H.MUDD	SPECIAL PHOTOCHEM. LAB	STATE-20
SP4G01.716	NASA-GSFC	4-CH. SUN-PHOTOMETER	STATE-20
ARL.716	NOAA-ARL	SMALL TETROON DATA	STATE-20
EPAO.716	EPA/FAA/SRI	LARGE TETROON DATA	STATE-20
STBGVS.716	NASA-LARC	SMALL TETHERED BALLOON DATA	STATE-VS
UAWIND.716	NWS	UPPER AIR WIND DATA	NWS-WIND
UATEMP.716	NWS	UPPER AIR TEMP DATA	NWS-TEMP

SUMARY.717		LIST OF FILES FOR 7/17/80	
ANLG.717	ANL	SURFACE FLUX DATA	STATE-20
MUDD.717	H.MUDD	SPECIAL PHOTOCHEM. LAB	STATE-20
SP4G01.717	NASA-GSFC	4-CH. SUN-PHOTOMETER	STATE-20
STBGVS.717	NASA-LARC	SMALL TETHERED BALLOON DATA	STATE-VS
UAWIND.717	NWS	UPPER AIR WIND DATA	NWS-WIND
UATEMP.717	NWS	UPPER AIR TEMP DATA	NWS-TEMP

SUMARY.718		LIST OF FILES FOR 7/18/80	
LASA.718	NASA/JPL	QUEEN AIR LAS DATA	STATE-20
UVDA.718	NASA-LARC	ELECTRA UV-DIAL DATA	STATE-20
ANLG.718	ANL	SURFACE FLUX DATA	STATE-20
MUDD.718	H.MUDD	SPECIAL PHOTOCHEM. LAB	STATE-20
SP4G01.718	NASA-GSFC	4-CH. SUN-PHOTOMETER	STATE-20
ARL.718	NOAA-ARL	SMALL TETROON DATA	STATE-20
STBGVS.718	NASA-LARC	SMALL TETHERED BALLOON DATA	STATE-VS
AVPI01.718	AV	SODAR 1 PIBAL DATA	STATE-VS
AVAS01.718	AV	SODAR 1 AIRSONDE DATA	STATE-VS
UAWIND.718	NWS	UPPER AIR WIND DATA	NWS-WIND
UATEMP.718	NWS	UPPER AIR TEMP DATA	NWS-TEMP

SUMARY.719		LIST OF FILES FOR 7/19/80	

(... continued)

ANLG.719	ANL	SURFACE FLUX DATA	STATE-20
MUDD.719	H.MUDD	SPECIAL PHOTOCHEM. LAB	STATE-20
SP4G01.719	NASA-GSFC	4-CH. SUN-PHOTOMETER	STATE-20
UAWIND.719	NWS	UPPER AIR WIND DATA	NWS-WIND
UATEMP.719	NWS	UPPER AIR TEMP DATA	NWS-TEMP

SUMARY.720		LIST OF FILES FOR 7/20/80	
LASA.720	NASA/JPL	QUEEN AIR LAS DATA	STATE-20
UMCG.720	U.MINN	UMHL CONTINUOUS (SUMMARY)	STATE-20
UMPG.720	U.MINN	UMHL PARTICULATE (SUMMARY)	STATE-20
UMSD.720	U.MINN	UMHL SIZE DISTRN (SUMMARY)	STATE-20
ANLG.720	ANL	SURFACE FLUX DATA	STATE-20
MUDD.720	H.MUDD	SPECIAL PHOTOCHEM. LAB	STATE-20
SP4G01.720	NASA-GSFC	4-CH. SUN-PHOTOMETER	STATE-20
ARL01.720	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL02.720	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL03.720	NOAA-ARL	SMALL TETROON DATA	STATE-20
STBGVS.720	NASA-LARC	SMALL TETHERED BALLOON DATA	STATE-VS
AVPI01.720	AV	SODAR 1 PIBAL DATA	STATE-VS
AVPI02.720	AV	SODAR 2 PIBAL DATA	STATE-VS
AVAS01.720	AV	SODAR 1 AIRSONDE DATA	STATE-VS
AVAS02.720	AV	SODAR 2 AIRSONDE DATA	STATE-VS
UAWIND.720	NWS	UPPER AIR WIND DATA	NWS-WIND
UATEMP.720	NWS	UPPER AIR TEMP DATA	NWS-TEMP

SUMARY.721		LIST OF FILES FOR 7/21/80	
ANLG.721	ANL	SURFACE FLUX DATA	STATE-20
MUDD.721	H.MUDD	SPECIAL PHOTOCHEM. LAB	STATE-20
SP4G01.721	NASA-GSFC	4-CH. SUN-PHOTOMETER	STATE-20
STBGVS.721	NASA-LARC	SMALL TETHERED BALLOON DATA	STATE-VS
AVPI01.721	AV	SODAR 1 PIBAL DATA	STATE-VS
AVPI02.721	AV	SODAR 2 PIBAL DATA	STATE-VS
AVAS01.721	AV	SODAR 1 AIRSONDE DATA	STATE-VS
AVAS02.721	AV	SODAR 2 AIRSONDE DATA	STATE-VS
BERTIN.721	BERTIN	3-D SODAR DATA	STATE-VS
UAWIND.721	NWS	UPPER AIR WIND DATA	NWS-WIND
UATEMP.721	NWS	UPPER AIR TEMP DATA	NWS-TEMP

SUMARY.722		LIST OF FILES FOR 7/22/80	
MUDD.722	H.MUDD	SPECIAL PHOTOCHEM. LAB	STATE-20
SP4G01.722	NASA-GSFC	4-CH. SUN-PHOTOMETER	STATE-20
BERTIN.722	BERTIN	3-D SODAR DATA	STATE-VS
UAWIND.722	NWS	UPPER AIR WIND DATA	NWS-WIND
UATEMP.722	NWS	UPPER AIR TEMP DATA	NWS-TEMP

SUMARY.723		LIST OF FILES FOR 7/23/80	
AVA.723	AV	CHEM II AIRCRAFT DATA	STATE-20
LASA.723	NASA/JPL	QUEEN AIR LAS DATA	STATE-20

(... continued)

MUDD.723	H.MUDD	SPECIAL PHOTOCHEM. LAB	STATE-20
SP4G01.723	NASA-GSFC	4-CH. SUN-PHOTOMETER	STATE-20
STBGVS.723	NASA-LARC	SMALL TETHERED BALLOON DATA	STATE-VS
BERTIN.723	BERTIN	3-D SODAR DATA	STATE-VS
UAWIND.723	NWS	UPPER AIR WIND DATA	NWS-WIND
UATEMP.723	NWS	UPPER AIR TEMP DATA	NWS-TEMP

SUMARY.724		LIST OF FILES FOR 7/24/80	
AVA.724	AV	CHEM II AIRCRAFT DATA	STATE-20
CHOP.724	EPA/EMI	CHOPPER HELICOPTER DATA	STATE-20
UVDA.724	NASA-LARC	ELECTRA UV-DIAL DATA	STATE-20
HRLA.724	NASA/U.WIS	ELECTRA HSRL DATA	STATE-20
EMIG.724	EMI	AQML DATA	STATE-20
UMCG.724	U.MINN	UMHL CONTINUOUS (SUMMARY)	STATE-20
UMPG.724	U.MINN	UMHL PARTICULATE (SUMMARY)	STATE-20
UMSD.724	U.MINN	UMHL SIZE DISTRN (SUMMARY)	STATE-20
MUDD.724	H.MUDD	SPECIAL PHOTOCHEM. LAB	STATE-20
SP4G01.724	NASA-GSFC	4-CH. SUN-PHOTOMETER	STATE-20
ARL01.724	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL02.724	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL03.724	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL04.724	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL05.724	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL06.724	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL07.724	NOAA-ARL	SMALL TETROON DATA	STATE-20
EPAO.724	EPA/FAA/SRI	LARGE TETROON DATA	STATE-20
STBGVS.724	NASA-LARC	SMALL TETHERED BALLOON DATA	STATE-VS
CORAVS.724	NASA-LARC	CHEM III BSCAT,03 CF. UVDIAL	STATE-VS
CRTAVS.724	NASA-LARC	CHEM III TEMP CF. UVDIAL	STATE-VS
AVPI01.724	AV	SODAR 1 PIBAL DATA	STATE-VS
AVAS01.724	AV	SODAR 1 AIRSONDE DATA	STATE-VS
BERTIN.724	BERTIN	3-D SODAR DATA	STATE-VS
UAWIND.724	NWS	UPPER AIR WIND DATA	NWS-WIND
UATEMP.724	NWS	UPPER AIR TEMP DATA	NWS-TEMP

SUMARY.725		LIST OF FILES FOR 7/25/80	
AVA01.725	AV	CHEM II AIRCRAFT DATA	STATE-20
AVA02.725	AV	CHEM II AIRCRAFT DATA	STATE-20
CHOP01.725	EPA/EMI	CHOPPER HELICOPTER DATA	STATE-20
CHOP02.725	EPA/EMI	CHOPPER HELICOPTER DATA	STATE-20
UVDA.725	NASA-LARC	ELECTRA UV-DIAL DATA	STATE-20
HRLA.725	NASA/U.WIS	ELECTRA HSRL DATA	STATE-20
EMIG.725	EMI	AQML DATA	STATE-20
UMCG.725	U.MINN	UMHL CONTINUOUS (SUMMARY)	STATE-20
UMPG.725	U.MINN	UMHL PARTICULATE (SUMMARY)	STATE-20
UMSD.725	U.MINN	UMHL SIZE DISTRN (SUMMARY)	STATE-20
ANLG.725	ANL	SURFACE FLUX DATA	STATE-20
MUDD.725	H.MUDD	SPECIAL PHOTOCHEM. LAB	STATE-20
SP4G01.725	NASA-GSFC	4-CH. SUN-PHOTOMETER	STATE-20
ARL01.725	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL02.725	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL03.725	NOAA-ARL	SMALL TETROON DATA	STATE-20

(...continued)

ARL04.725	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL05.725	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL06.725	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL07.725	NOAA-ARL	SMALL TETROON DATA	STATE-20
EPAO.725	EPA/FAA/SRI	LARGE TETROON DATA	STATE-20
STBGVS.725	NASA-LARC	SMALL TETHERED BALLOON DATA	STATE-VS
CORAVS.725	NASA-LARC	CHEM III BSCAT,03 CF. UVDIAL	STATE-VS
CRTAVS.725	NASA-LARC	CHEM III TEMP CF. UVDIAL	STATE-VS
AVPI01.725	AV	SODAR 1 PIBAL DATA	STATE-VS
AVPI02.725	AV	SODAR 2 PIBAL DATA	STATE-VS
AVAS01.725	AV	SODAR 1 AIRSONDE DATA	STATE-VS
AVAS02.725	AV	SODAR 2 AIRSONDE DATA	STATE-VS
BERTIN.725	BERTIN	3-D SODAR DATA	STATE-VS
UAWIND.725	NWS	UPPER AIR WIND DATA	NWS-WIND
UATEMP.725	NWS	UPPER AIR TEMP DATA	NWS-TEMP

SUMARY.726		LIST OF FILES FOR 7/26/80	
EMIG.726	EMI	AQML DATA	STATE-20
ANLG.726	ANL	SURFACE FLUX DATA	STATE-20
MUDD.726	H.MUDD	SPECIAL PHOTOCHEM. LAB	STATE-20
SP8G01.726	NASA-GSFC	8-CH. RADIOMETER NETWORK	STATE-20
SP4G01.726	NASA-GSFC	4-CH. SUN-PHOTOMETER	STATE-20
ARL01.726	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL02.726	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL03.726	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL04.726	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL05.726	NOAA-ARL	SMALL TETROON DATA	STATE-20
EPAO.726	EPA/FAA/SRI	LARGE TETROON DATA	STATE-20
STBGVS.726	NASA-LARC	SMALL TETHERED BALLOON DATA	STATE-VS
AVPI02.726	AV	SODAR 2 PIBAL DATA	STATE-VS
AVAS02.726	AV	SODAR 2 AIRSONDE DATA	STATE-VS
BERTIN.726	BERTIN	3-D SODAR DATA	STATE-VS
UAWIND.726	NWS	UPPER AIR WIND DATA	NWS-WIND
UATEMP.726	NWS	UPPER AIR TEMP DATA	NWS-TEMP

SUMARY.727		LIST OF FILES FOR 7/27/80	
UMCG01.727	U.MINN	UMHL CONTINUOUS (SUMMARY)	STATE-20
UMCG02.727	U.MINN	UMHL CONTINUOUS (SUMMARY)	STATE-20
UMPG01.727	U.MINN	UMHL PARTICULATE (SUMMARY)	STATE-20
UMPG02.727	U.MINN	UMHL PARTICULATE (SUMMARY)	STATE-20
UMSD01.727	U.MINN	UMHL SIZE DISTRN (SUMMARY)	STATE-20
UMSD02.727	U.MINN	UMHL SIZE DISTRN (SUMMARY)	STATE-20
MUDD.727	H.MUDD	SPECIAL PHOTOCHEM. LAB	STATE-20
SP4G01.727	NASA-GSFC	4-CH. SUN-PHOTOMETER	STATE-20
BERTIN.727	BERTIN	3-D SODAR DATA	STATE-VS
UAWIND.727	NWS	UPPER AIR WIND DATA	NWS-WIND
UATEMP.727	NWS	UPPER AIR TEMP DATA	NWS-TEMP

SUMARY.728		LIST OF FILES FOR 7/28/80	
UMCG.728	U.MINN	UMHL CONTINUOUS (SUMMARY)	STATE-20

(... continued)

UMPG.728	U.MINN	UMHL PARTICULATE (SUMMARY)	STATE-20
UMSD.728	U.MINN	UMHL SIZE DISTRN (SUMMARY)	STATE-20
MUDD.728	H.MUDD	SPECIAL PHOTOCHEM. LAB	STATE-20
SP4G01.728	NASA-GSFC	4-CH. SUN-PHOTOMETER	STATE-20
BERTIN.728	BERTIN	3-D SODAR DATA	STATE-VS
UAWIND.728	NWS	UPPER AIR WIND DATA	NWS-WIND
UATEMP.728	NWS	UPPER AIR TEMP DATA	NWS-TEMP

SUMARY.729		LIST OF FILES FOR 7/29/80	
CHOP.729	EPA/EMI	CHOPPER HELICOPTER DATA	STATE-20
ANLG.729	ANL	SURFACE FLUX DATA	STATE-20
MUDD.729	H.MUDD	SPECIAL PHOTOCHEM. LAB	STATE-20
SP4G01.729	NASA-GSFC	4-CH. SUN-PHOTOMETER	STATE-20
ARL01.729	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL02.729	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL03.729	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL04.729	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL05.729	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL06.729	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL07.729	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL08.729	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL09.729	NOAA-ARL	SMALL TETROON DATA	STATE-20
STBGVS.729	NASA-LARC	SMALL TETHERED BALLOON DATA	STATE-VS
BERTIN.729	BERTIN	3-D SODAR DATA	STATE-VS
UAWIND.729	NWS	UPPER AIR WIND DATA	NWS-WIND
UATEMP.729	NWS	UPPER AIR TEMP DATA	NWS-TEMP

SUMARY.730		LIST OF FILES FOR 7/30/80	
EMIA.730	EMI	CHEM I AIRCRAFT DATA	STATE-20
AVA01.730	AV	CHEM II AIRCRAFT DATA	STATE-20
AVA02.730	AV	CHEM II AIRCRAFT DATA	STATE-20
SRIA01.730	SRI	SCOUT AIRCRAFT DATA	STATE-20
SRIA02.730	SRI	SCOUT AIRCRAFT DATA	STATE-20
SRIA03.730	SRI	SCOUT AIRCRAFT DATA	STATE-20
CHOP01.730	EPA/EMI	CHOPPER HELICOPTER DATA	STATE-20
CHOP02.730	EPA/EMI	CHOPPER HELICOPTER DATA	STATE-20
EMIG.730	EMI	AQML DATA	STATE-20
ANLG.730	ANL	SURFACE FLUX DATA	STATE-20
MUDD.730	H.MUDD	SPECIAL PHOTOCHEM. LAB	STATE-20
SP8G01.730	NASA-GSFC	8-CH. RADIOMETER NETWORK	STATE-20
SP4G01.730	NASA-GSFC	4-CH. SUN-PHOTOMETER	STATE-20
ARL01.730	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL02.730	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL03.730	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL04.730	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL05.730	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL06.730	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL07.730	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL08.730	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL09.730	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL10.730	NOAA-ARL	SMALL TETROON DATA	STATE-20
EPAO.730	EPA/FAA/SRI	LARGE TETROON DATA	STATE-20

(... continued)

STBGVS.730	NASA-LARC	SMALL TETHERED BALLOON DATA	STATE-VS
AVPI01.730	AV	SODAR 1 PIBAL DATA	STATE-VS
AVAS01.730	AV	SODAR 1 AIRSONDE DATA	STATE-VS
BERTIN.730	BERTIN	3-D SODAR DATA	STATE-VS
UAWIND.730	NWS	UPPER AIR WIND DATA	NWS-WIND
UATEMP.730	NWS	UPPER AIR TEMP DATA	NWS-TEMP

SUMARY.731		LIST OF FILES FOR 7/31/80	
EMIA.731	EMI	CHEM I AIRCRAFT DATA	STATE-20
AVA01.731	AV	CHEM II AIRCRAFT DATA	STATE-20
AVA02.731	AV	CHEM II AIRCRAFT DATA	STATE-20
SRIA.731	SRI	SCOUT AIRCRAFT DATA	STATE-20
UVDA01.731	NASA-LARC	ELECTRA UV-DIAL DATA	STATE-20
UVDA02.731	NASA-LARC	ELECTRA UV-DIAL DATA	STATE-20
HRLA01.731	NASA/U.WIS	ELECTRA HSRL DATA	STATE-20
HRLA02.731	NASA/U.WIS	ELECTRA HSRL DATA	STATE-20
EMIG.731	EMI	AQML DATA	STATE-20
ANLG.731	ANL	SURFACE FLUX DATA	STATE-20
MUDD.731	H.MUDD	SPECIAL PHOTOCHEM. LAB	STATE-20
SP8G01.731	NASA-GSFC	8-CH. RADIOMETER NETWORK	STATE-20
SP4G01.731	NASA-GSFC	4-CH. SUN-PHOTOMETER	STATE-20
ARL01.731	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL02.731	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL03.731	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL04.731	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL05.731	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL06.731	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL07.731	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL08.731	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL09.731	NOAA-ARL	SMALL TETROON DATA	STATE-20
CORAVS.731	NASA-LARC	CHEM III BSCAT,03 CF. UVDIAL	STATE-VS
CRTAVS.731	NASA-LARC	CHEM III TEMP CF. UVDIAL	STATE-VS
AVPI01.731	AV	SODAR 1 PIBAL DATA	STATE-VS
AVAS01.731	AV	SODAR 1 AIRSONDE DATA	STATE-VS
BERTIN.731	BERTIN	3-D SODAR DATA	STATE-VS
UAWIND.731	NWS	UPPER AIR WIND DATA	NWS-WIND
UATEMP.731	NWS	UPPER AIR TEMP DATA	NWS-TEMP

SUMARY.801		LIST OF FILES FOR 8/01/80	
AVA01.801	AV	CHEM II AIRCRAFT DATA	STATE-20
AVA02.801	AV	CHEM II AIRCRAFT DATA	STATE-20
CHOP.801	EPA/EMI	CHOPPER HELICOPTER DATA	STATE-20
UMCG.801	U.MINN	UMHL CONTINUOUS (SUMMARY)	STATE-20
UMPG.801	U.MINN	UMHL PARTICULATE (SUMMARY)	STATE-20
UMSD.801	U.MINN	UMHL SIZE DISTRN (SUMMARY)	STATE-20
ANLG.801	ANL	SURFACE FLUX DATA	STATE-20
MUDD.801	H.MUDD	SPECIAL PHOTOCHEM. LAB	STATE-20
SP4G01.801	NASA-GSFC	4-CH. SUN-PHOTOMETER	STATE-20
STBGVS.801	NASA-LARC	SMALL TETHERED BALLOON DATA	STATE-VS
AVPI01.801	AV	SODAR 1 PIBAL DATA	STATE-VS
AVAS01.801	AV	SODAR 1 AIRSONDE DATA	STATE-VS
BERTIN.801	BERTIN	3-D SODAR DATA	STATE-VS

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UAWIND.801	NWS	UPPER AIR WIND DATA	NWS-WIND
UATEMP.801	NWS	UPPER AIR TEMP DATA	NWS-TEMP

SUMARY.802		LIST OF FILES FOR 8/02/80	
EMIA.802	EMI	CHEM I AIRCRAFT DATA	STATE-20
AVA.802	AV	CHEM II AIRCRAFT DATA	STATE-20
SRIA.802	SRI	SCOUT AIRCRAFT DATA	STATE-20
CHOP.802	EPA/EMI	CHOPPER HELICOPTER DATA	STATE-20
UVDA.802	NASA-LARC	ELECTRA UV-DIAL DATA	STATE-20
HRLA.802	NASA/U.WIS	ELECTRA HSRL DATA	STATE-20
EMIG.802	EMI	AQML DATA	STATE-20
UMCG.802	U.MINN	UMHL CONTINUOUS (SUMMARY)	STATE-20
UMPG.802	U.MINN	UMHL PARTICULATE (SUMMARY)	STATE-20
UMSD.802	U.MINN	UMHL SIZE DISTRN (SUMMARY)	STATE-20
ANLG.802	ANL	SURFACE FLUX DATA	STATE-20
MUDD.802	H.MUDD	SPECIAL PHOTOCHEM. LAB	STATE-20
SP8G01.802	NASA-GSFC	8-CH. RADIOMETER NETWORK	STATE-20
SP4G01.802	NASA-GSFC	4-CH. SUN-PHOTOMETER	STATE-20
ARL01.802	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL02.802	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL03.802	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL04.802	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL05.802	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL06.802	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL07.802	NOAA-ARL	SMALL TETROON DATA	STATE-20
CORAVS.802	NASA-LARC	CHEM III BSCAT,03 CF. UVDIAL	STATE-VS
CRTAVS.802	NASA-LARC	CHEM III TEMP CF. UVDIAL	STATE-VS
AVPI01.802	AV	SODAR 1 PIBAL DATA	STATE-VS
AVAS01.802	AV	SODAR 1 AIRSONDE DATA	STATE-VS
BERTIN.802	BERTIN	3-D SODAR DATA	STATE-VS
UAWIND.802	NWS	UPPER AIR WIND DATA	NWS-WIND
UATEMP.802	NWS	UPPER AIR TEMP DATA	NWS-TEMP

SUMARY.803		LIST OF FILES FOR 8/03/80	
MUDD.803	H.MUDD	SPECIAL PHOTOCHEM. LAB	STATE-20
SP4G01.803	NASA-GSFC	4-CH. SUN-PHOTOMETER	STATE-20
BERTIN.803	BERTIN	3-D SODAR DATA	STATE-VS
UAWIND.803	NWS	UPPER AIR WIND DATA	NWS-WIND
UATEMP.803	NWS	UPPER AIR TEMP DATA	NWS-TEMP

SUMARY.804		LIST OF FILES FOR 8/04/80	
EMIA01.804	EMI	CHEM I AIRCRAFT DATA	STATE-20
EMIA02.804	EMI	CHEM I AIRCRAFT DATA	STATE-20
AVA01.804	AV	CHEM II AIRCRAFT DATA	STATE-20
AVA02.804	AV	CHEM II AIRCRAFT DATA	STATE-20
SRIA01.804	SRI	SCOUT AIRCRAFT DATA	STATE-20
SRIA02.804	SRI	SCOUT AIRCRAFT DATA	STATE-20
CHOP01.804	EPA/EMI	CHOPPER HELICOPTER DATA	STATE-20
CHOP02.804	EPA/EMI	CHOPPER HELICOPTER DATA	STATE-20
ERLU.804	NOAA-ERL	TURBULENCE AIRCRAFT (UNFILTERED)	STATE-20

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ERLF.804	NOAA-ERL	TURBULENCE AIRCRAFT (FILTERED)	STATE-20
EMIG.804	EMI	AQML DATA	STATE-20
UMCG.804	U.MINN	UMHL CONTINUOUS (SUMMARY)	STATE-20
UMPG.804	U.MINN	UMHL PARTICULATE (SUMMARY)	STATE-20
UMSD.804	U.MINN	UMHL SIZE DISTRN (SUMMARY)	STATE-20
ANLG.804	ANL	SURFACE FLUX DATA	STATE-20
MUDD.804	H.MUDD	SPECIAL PHOTOCHEM. LAB	STATE-20
SP4G01.804	NASA-GSFC	4-CH. SUN-PHOTOMETER	STATE-20
ARL01.804	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL02.804	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL03.804	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL04.804	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL05.804	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL06.804	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL07.804	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL08.804	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL09.804	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL10,804	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL11.804	NOAA-ARL	SMALL TETROON DATA	STATE-20
EPAO.804	EPA/FAA/SRI	LARGE TETROON DATA	STATE-20
STBGVS.804	NASA-LARC	SMALL TETHERED BALLOON DATA	STATE-VS
AVPI01.804	AV	SODAR 1 PIBAL DATA	STATE-VS
AVPI02.804	AV	SODAR 2 PIBAL DATA	STATE-VS
AVAS01.804	AV	SODAR 1 AIRSONDE DATA	STATE-VS
AVAS02.804	AV	SODAR 2 AIRSONDE DATA	STATE-VS
BERTIN.804	BERTIN	3-D SODAR DATA	STATE-VS
UAWIND.804	NWS	UPPER AIR WIND DATA	NWS-WIND
UATEMP.804	NWS	UPPER AIR TEMP DATA	NWS-TEMP

SUMARY.805		LIST OF FILES FOR 8/05/80	
EMIA.805	EMI	CHEM I AIRCRAFT DATA	STATE-20
CHOP.805	EPA/EMI	CHOPPER HELICOPTER DATA	STATE-20
UVDA.805	NASA-LARC	ELECTRA UV-DIAL DATA	STATE-20
HRLA.805	NASA/U.WIS	ELECTRA HSRL DATA	STATE-20
ERLU.805	NOAA-ERL	TURBULENCE AIRCRAFT (UNFILTERED)	STATE-20
ERLF.805	NOAA-ERL	TURBULENCE AIRCRAFT (FILTERED)	STATE-20
UMCG.805	U.MINN	UMHL CONTINUOUS (SUMMARY)	STATE-20
UMPG.805	U.MINN	UMHL PARTICULATE (SUMMARY)	STATE-20
UMSD.805	U.MINN	UMHL SIZE DISTRN (SUMMARY)	STATE-20
ANLG.805	ANL	SURFACE FLUX DATA	STATE-20
MUDD.805	H.MUDD	SPECIAL PHOTOCHEM. LAB	STATE-20
SP8G01.805	NASA-GSFC	8-CH. RADIOMETER NETWORK	STATE-20
SP4G01.805	NASA-GSFC	4-CH. SUN-PHOTOMETER	STATE-20
EPAO.805	EPA/FAA/SRI	LARGE TETROON DATA	STATE-20
CORAVS.805	NASA-LARC	CHEM III BSCAT,03 CF. UVDIAL	STATE-VS
CRTAVS.805	NASA-LARC	CHEM III TEMP CF. UVDIAL	STATE-VS
BERTIN.805	BERTIN	3-D SODAR DATA	STATE-VS
UAWIND.805	NWS	UPPER AIR WIND DATA	NWS-WIND
UATEMP.805	NWS	UPPER AIR TEMP DATA	NWS-TEMP

SUMARY.806		LIST OF FILES FOR 8/06/80	
UMCG.806	U.MINN	UMHL CONTINUOUS (SUMMARY)	STATE-20

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UMPG.806	U.MINN	UMHL PARTICULATE (SUMMARY)	STATE-20
UMSD.806	U.MINN	UMHL SIZE DISTRN (SUMMARY)	STATE-20
MUDD.806	H.MUDD	SPECIAL PHOTOCHEM. LAB	STATE-20
RMSG01.806	NASA/JPL	MARS - REMOTE SPECTROMETER	STATE-20
PMRG01.806	NASA/JPL	MARS - PASSIVE SPECTROMETER	STATE-20
STBGVS.806	NASA-LARC	SMALL TETHERED BALLOON DATA	STATE-VS
BERTIN.806	BERTIN	3-D SODAR DATA	STATE-VS
UAWIND.806	NWS	UPPER AIR WIND DATA	NWS-WIND
UATEMP.806	NWS	UPPER AIR TEMP DATA	NWS-TEMP

SUMARY.807		LIST OF FILES FOR 8/07/80	
EMIA.807	EMI	CHEM I AIRCRAFT DATA	STATE-20
AVA01.807	AV	CHEM II AIRCRAFT DATA	STATE-20
AVA02.807	AV	CHEM II AIRCRAFT DATA	STATE-20
SRIA01.807	SRI	SCOUT AIRCRAFT DATA	STATE-20
SRIA02.807	SRI	SCOUT AIRCRAFT DATA	STATE-20
SRIA03.807	SRI	SCOUT AIRCRAFT DATA	STATE-20
UVDA.807	NASA-LARC	ELECTRA UV-DIAL DATA	STATE-20
HRLA.807	NASA/U.WIS	ELECTRA HSRL DATA	STATE-20
ERLU.807	NOAA-ERL	TURBULENCE AIRCRAFT (UNFILTERED)	STATE-20
ERLF.807	NOAA-ERL	TURBULENCE AIRCRAFT (FILTERED)	STATE-20
EMIG.807	EMI	AQML DATA	STATE-20
MUDD.807	H.MUDD	SPECIAL PHOTOCHEM. LAB	STATE-20
SP8G01.807	NASA-GSFC	8-CH. RADIOMETER NETWORK	STATE-20
SP4G01.807	NASA-GSFC	4-CH. SUN-PHOTOMETER	STATE-20
RMSG01.807	NASA/JPL	MARS - REMOTE SPECTROMETER	STATE-20
PMRG01.807	NASA/JPL	MARS - PASSIVE SPECTROMETER	STATE-20
ARL01.807	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL02.807	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL03.807	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL04.807	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL05.807	NOAA-ARL	SMALL TETROON DATA	STATE-20
EPAO01.807	EPA/FAA/SRI	LARGE TETROON DATA	STATE-20
EPAO02.807	EPA/FAA/SRI	LARGE TETROON DATA	STATE-20
STBGVS.807	NASA-LARC	SMALL TETHERED BALLOON DATA	STATE-VS
CORAVS.807	NASA-LARC	CHEM III BSCAT,03 CF. UVDIAL	STATE-VS
CRTAVS.807	NASA-LARC	CHEM III TEMP CF. UVDIAL	STATE-VS
AVPI01.807	AV	SODAR 1 PIBAL DATA	STATE-VS
AVPI02.807	AV	SODAR 2 PIBAL DATA	STATE-VS
AVAS01.807	AV	SODAR 1 AIRSONDE DATA	STATE-VS
AVAS02.807	AV	SODAR 2 AIRSONDE DATA	STATE-VS
BERTIN.807	BERTIN	3-D SODAR DATA	STATE-VS
UAWIND.807	NWS	UPPER AIR WIND DATA	NWS-WIND
UATEMP.807	NWS	UPPER AIR TEMP DATA	NWS-TEMP

SUMARY.808		LIST OF FILES FOR 8/08/80	
EMIA.808	EMI	CHEM I AIRCRAFT DATA	STATE-20
AVA01.808	AV	CHEM II AIRCRAFT DATA	STATE-20
AVA02.808	AV	CHEM II AIRCRAFT DATA	STATE-20
AVA03.808	AV	CHEM II AIRCRAFT DATA	STATE-20
SRIA01.808	SRI	SCOUT AIRCRAFT DATA	STATE-20
SRIA02.808	SRI	SCOUT AIRCRAFT DATA	STATE-20

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ERLU.808	NOAA-ERL	TURBULENCE AIRCRAFT (UNFILTERED)	STATE-20
ERLF.808	NOAA-ERL	TURBULENCE AIRCRAFT (FILTERED)	STATE-20
EMIG.808	EMI	AQML DATA	STATE-20
UMCG.808	U.MINN	UMHL CONTINUOUS (SUMMARY)	STATE-20
UMPG.808	U.MINN	UMHL PARTICULATE (SUMMARY)	STATE-20
UMSD.808	U.MINN	UMHL SIZE DISTRN (SUMMARY)	STATE-20
MUDD.808	H.MUDD	SPECIAL PHOTOCHEM. LAB	STATE-20
SP8G01.808	NASA-GSFC	8-CH. RADIOMETER NETWORK	STATE-20
SP4G01.808	NASA-GSFC	4-CH. SUN-PHOTOMETER	STATE-20
RMSG01.808	NASA/JPL	MARS - REMOTE SPECTROMETER	STATE-20
PMRG01.808	NASA/JPL	MARS - PASSIVE SPECTROMETER	STATE-20
ARL01.808	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL02.808	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL03.808	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL04.808	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL05.808	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL06.808	NOAA-ARL	SMALL TETROON DATA	STATE-20
EPAO01.808	EPA/FAA/SRI	LARGE TETROON DATA	STATE-20
EPAO02.808	EPA/FAA/SRI	LARGE TETROON DATA	STATE-20
STBGVS.808	NASA-LARC	SMALL TETHERED BALLOON DATA	STATE-VS
AVPI01.808	AV	SODAR 1 PIBAL DATA	STATE-VS
AVPI02.808	AV	SODAR 2 PIBAL DATA	STATE-VS
AVAS01.808	AV	SODAR 1 AIRSONDE DATA	STATE-VS
AVAS02.808	AV	SODAR 2 AIRSONDE DATA	STATE-VS
BERTIN.808	BERTIN	3-D SODAR DATA	STATE-VS
UAWIND.808	NWS	UPPER AIR WIND DATA	NWS-WIND
UATEMP.808	NWS	UPPER AIR TEMP DATA	NWS-TEMP

SUMARY.809		LIST OF FILES FOR 8/09/80	
EMIA.809	EMI	CHEM I AIRCRAFT DATA	STATE-20
AVA01.809	AV	CHEM II AIRCRAFT DATA	STATE-20
AVA02.809	AV	CHEM II AIRCRAFT DATA	STATE-20
UVDA.809	NASA-LARC	ELECTRA UV-DIAL DATA	STATE-20
HRLA.809	NASA/U.WIS	ELECTRA HSRL DATA	STATE-20
EMIG.809	EMI	AQML DATA	STATE-20
MUDD.809	H.MUDD	SPECIAL PHOTOCHEM. LAB	STATE-20
SP4G01.809	NASA-GSFC	4-CH. SUN-PHOTOMETER	STATE-20
RMSG01.809	NASA/JPL	MARS - REMOTE SPECTROMETER	STATE-20
PMRG01.809	NASA/JPL	MARS - PASSIVE SPECTROMETER	STATE-20
STBGVS.809	NASA-LARC	SMALL TETHERED BALLOON DATA	STATE-VS
AVPI01.809	AV	SODAR 1 PIBAL DATA	STATE-VS
AVAS01.809	AV	SODAR 1 AIRSONDE DATA	STATE-VS
BERTIN.809	BERTIN	3-D SODAR DATA	STATE-VS
UAWIND.809	NWS	UPPER AIR WIND DATA	NWS-WIND
UATEMP.809	NWS	UPPER AIR TEMP DATA	NWS-TEMP

SUMARY.810		LIST OF FILES FOR 8/10/80	
AVA01.810	AV	CHEM II AIRCRAFT DATA	STATE-20
AVA02.810	AV	CHEM II AIRCRAFT DATA	STATE-20
UVDA.810	NASA-LARC	ELECTRA UV-DIAL DATA	STATE-20
ERLU.810	NOAA-ERL	TURBULENCE AIRCRAFT (UNFILTERED)	STATE-20
ERLF.810	NOAA-ERL	TURBULENCE AIRCRAFT (FILTERED)	STATE-20

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EMIG.810	EMI	AQML DATA	STATE-20
MUDD.810	H.MUDD	SPECIAL PHOTOCHEM. LAB	STATE-20
SP4G01.810	NASA-GSFC	4-CH. SUN-PHOTOMETER	STATE-20
RMSG01.810	NASA/JPL	MARS - REMOTE SPECTROMETER	STATE-20
PMRG01.810	NASA/JPL	MARS - PASSIVE SPECTROMETER	STATE-20
ARL01.810	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL02.810	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL03.810	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL04.810	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL05.810	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL06.810	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL07.810	NOAA-ARL	SMALL TETROON DATA	STATE-20
EPAO.810	EPA/FAA/SRI	LARGE TETROON DATA	STATE-20
AVPI01.810	AV	SODAR 1 PIBAL DATA	STATE-VS
AVPI02.810	AV	SODAR 2 PIBAL DATA	STATE-VS
AVAS01.810	AV	SODAR 1 AIRSONDE DATA	STATE-VS
AVAS02.810	AV	SODAR 2 AIRSONDE DATA	STATE-VS
BERTIN.810	BERTIN	3-D SODAR DATA	STATE-VS
UAWIND.810	NWS	UPPER AIR WIND DATA	NWS-WIND
UATEMP.810	NWS	UPPER AIR TEMP DATA	NWS-TEMP

SUMARY.811		LIST OF FILES FOR 8/11/80	
EMIA.811	EMI	CHEM I AIRCRAFT DATA	STATE-20
AVA.811	AV	CHEM II AIRCRAFT DATA	STATE-20
CHOP01.811	EPA/EMI	CHOPPER HELICOPTER DATA	STATE-20
CHOP02.811	EPA/EMI	CHOPPER HELICOPTER DATA	STATE-20
ERLU.811	NOAA-ERL	TURBULENCE AIRCRAFT (UNFILTERED)	STATE-20
ERLF.811	NOAA-ERL	TURBULENCE AIRCRAFT (FILTERED)	STATE-20
EMIG.811	EMI	AQML DATA	STATE-20
MUDD.811	H.MUDD	SPECIAL PHOTOCHEM. LAB	STATE-20
SP4G01.811	NASA-GSFC	4-CH. SUN-PHOTOMETER	STATE-20
ARL01.811	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL02.811	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL03.811	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL04.811	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL05.811	NOAA-ARL	SMALL TETROON DATA	STATE-20
EPAO.811	EPA/FAA/SRI	LARGE TETROON DATA	STATE-20
AVPI01.811	AV	SODAR 1 PIBAL DATA	STATE-VS
AVPI02.811	AV	SODAR 2 PIBAL DATA	STATE-VS
AVAS01.811	AV	SODAR 1 AIRSONDE DATA	STATE-VS
AVAS02.811	AV	SODAR 2 AIRSONDE DATA	STATE-VS
BERTIN.811	BERTIN	3-D SODAR DATA	STATE-VS
UAWIND.811	NWS	UPPER AIR WIND DATA	NWS-WIND
UATEMP.811	NWS	UPPER AIR TEMP DATA	NWS-TEMP

SUMARY.812		LIST OF FILES FOR 8/12/80	
EMIA.812	EMI	CHEM I AIRCRAFT DATA	STATE-20
AVA.812	AV	CHEM II AIRCRAFT DATA	STATE-20
CHOP01.812	EPA/EMI	CHOPPER HELICOPTER DATA	STATE-20
CHOP02.812	EPA/EMI	CHOPPER HELICOPTER DATA	STATE-20
CHOP03.812	EPA/EMI	CHOPPER HELICOPTER DATA	STATE-20
UVDA.812	NASA-LARC	ELECTRA UV-DIAL DATA	STATE-20

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HRLA.812	NASA/U.WIS	ELECTRA HSRL DATA	STATE-20
ERLU.812	NOAA-ERL	TURBULENCE AIRCRAFT (UNFILTERED)	STATE-20
ERLF.812	NOAA-ERL	TURBULENCE AIRCRAFT (FILTERED)	STATE-20
EMIG.812	EMI	AQML DATA	STATE-20
MUDD.812	H.MUDD	SPECIAL PHOTOCHEM. LAB	STATE-20
SP4G01.812	NASA-GSFC	4-CH. SUN-PHOTOMETER	STATE-20
ARL01.812	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL02.812	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL03.812	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL04.812	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL05.812	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL06.812	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL07.812	NOAA-ARL	SMALL TETROON DATA	STATE-20
EPAO.812	EPA/FAA/SRI	LARGE TETROON DATA	STATE-20
CORAVS.812	NASA-LARC	CHEM III BSCAT,03 CF. UVDIAL	STATE-VS
CRTAVS.812	NASA-LARC	CHEM III TEMP CF. UVDIAL	STATE-VS
AVPI01.812	AV	SODAR 1 PIBAL DATA	STATE-VS
AVAS01.812	AV	SODAR 1 AIRSONDE DATA	STATE-VS
UAWIND.812	NWS	UPPER AIR WIND DATA	NWS-WIND
UATEMP.812	NWS	UPPER AIR TEMP DATA	NWS-TEMP

SUMARY.813		LIST OF FILES FOR 8/13/80	
EMIA.813	EMI	CHEM I AIRCRAFT DATA	STATE-20
AVA.813	AV	CHEM II AIRCRAFT DATA	STATE-20
SRIA01.813	SRI	SCOUT AIRCRAFT DATA	STATE-20
SRIA02.813	SRI	SCOUT AIRCRAFT DATA	STATE-20
SRIA03.813	SRI	SCOUT AIRCRAFT DATA	STATE-20
CHOP.813	EPA/EMI	CHOPPER HELICOPTER DATA	STATE-20
UVDA01.813	NASA-LARC	ELECTRA UV-DIAL DATA	STATE-20
UVDA02.813	NASA-LARC	ELECTRA UV-DIAL DATA	STATE-20
UVDA03.813	NASA-LARC	ELECTRA UV-DIAL DATA	STATE-20
HRLA01.813	NASA/U.WIS	ELECTRA HSRL DATA	STATE-20
HRLA02.813	NASA/U.WIS	ELECTRA HSRL DATA	STATE-20
ERLU.813	NOAA-ERL	TURBULENCE AIRCRAFT (UNFILTERED)	STATE-20
ERLF.813	NOAA-ERL	TURBULENCE AIRCRAFT (FILTERED)	STATE-20
EMIG.813	EMI	AQML DATA	STATE-20
UMCG.813	U.MINN	UMHL CONTINUOUS (SUMMARY)	STATE-20
UMPG.813	U.MINN	UMHL PARTICULATE (SUMMARY)	STATE-20
UMSD.813	U.MINN	UMHL SIZE DISTRN (SUMMARY)	STATE-20
MUDD.813	H.MUDD	SPECIAL PHOTOCHEM. LAB	STATE-20
SP4G01.813	NASA-GSFC	4-CH.. SUN-PHOTOMETER	STATE-20
ARL01.813	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL02.813	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL03.813	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL04.813	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL05.813	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL06.813	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL07.813	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL08.813	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL09.813	NOAA-ARL	SMALL TETROON DATA	STATE-20
ARL10.813	NOAA-ARL	SMALL TETROON DATA	STATE-20
EPAO.813	EPA/FAA/SRI	LARGE TETROON DATA	STATE-20
CORAVS.813	NASA-LARC	CHEM III BSCAT,03 CF. UVDIAL	STATE-VS
CRTAVS.813	NASA-LARC	CHEM III TEMP CF. UVDIAL	STATE-VS

(... continued)

AVPI01.813	AV	SODAR 1 PIBAL DATA	STATE-VS
AVAS01.813	AV	SODAR 1 AIRSONDE DATA	STATE-VS
UAWIND.813	NWS	UPPER AIR WIND DATA	NWS-WIND
UATEMP.813	NWS	UPPER AIR TEMP DATA	NWS-TEMP
SUMARY.814		LIST OF FILES FOR 8/14/80	
MUDD.814	H.MUDD	SPECIAL PHOTOCHEM. LAB	STATE-20
SP8G01.814	NASA-GSFC	8-CH. RADIOMETER NETWORK	STATE-20
SP4G01.814	NASA-GSFC	4-CH. SUN-PHOTOMETER	STATE-20
EPAO.814	EPA/FAA/SRI	LARGE TETROON DATA	STATE-20
UAWIND.814	NWS	UPPER AIR WIND DATA	NWS-WIND
UATEMP.814	NWS	UPPER AIR TEMP DATA	NWS-TEMP
SUMARY.815		LIST OF FILES FOR 8/15/80	
AVA01.815	AV	CHEM II AIRCRAFT DATA	STATE-20
AVA02.815	AV	CHEM II AIRCRAFT DATA	STATE-20
MUDD.815	H.MUDD	SPECIAL PHOTOCHEM. LAB	STATE-20
SP4G01.815	NASA-GSFC	4-CH. SUN-PHOTOMETER	STATE-20
UAWIND.815	NWS	UPPER AIR WIND DATA	NWS-WIND
UATEMP.815	NWS	UPPER AIR TEMP DATA	NWS-TEMP

TABLE 7.

PEPE-NEROS 1980

TYPE OF FILES IN THE MONTHLY DATA BASE

FILENAME	ORGANIZATION	DATA DESCRIPTION	FORMAT
AVNA FS	AV	CHEM II - FILTER AEROSOL DATA	STATE-20
AVNA HC	AV	CHEM II - HYDROCARBON DATA	STATE-20
AVSIWS	AV	SODAR1, DOPPLER WIND SPEED	STATE-20
AVS1WD	AV	SODAR1, DOPPLER WIND DIRN	STATE-20
AVS2WS	AV	SODAR2, DOPPLER WIND SPEED	STATE-20
AVS2WD	AV	SODAR2, DOPPLER WIND DIRN	STATE-20
HCFTHS	EPA-GKPB	HYDROCARBON DATA, FT. HAYES SITE	STATE-20
HCWJEF	EPA-GKPB	HYDROCARBON DATA, W. JEFF. SITE	STATE-20
HCWCVO	EPA-GKPB	HYDROCARBON DATA, WCVO SITE	STATE-20
HCEMI	EPA-GKPB	HYDROCARBON DATA, CHEM I	STATE-20
HCAV	EPA-GKPB	HYDROCARBON DATA, CHEM II	STATE-20
HCSRI	EPA-GKPB	HYDROCARBON DATA, SCOUT	STATE-20
HCCHOP	EPA-GKPB	HYDROCARBON DATA, CHOPPER	STATE-20
NWSCOL	NWS	SURFACE COLUMBUS, OH	NWS/SURFAC
NWSMAN	NWS	WEATHER MANSFIELD, OH	NWS/SURFAC
NSWCIN	NWS	OBSERVATION CINCINNATI, KY	NWS/SURFAC
NWSDAY	NWS	NETWORK DAYTON, OH	NWS/SURFAC

(*) The files listed above individually contain data of the entire field period (7/15 - 8/15/80). These data sets are not included in the daily data base, and are supplementary to the daily data base.

TABLE 8.

TAPE SCAN OF TAPE 1

```
FILE   1 HAD:   1 BLOCKS:  MAX   640 MIN   640 WITH   0 ERRORS
FILE   2 HAD:   1 BLOCKS:  MAX  1360 MIN  1360 WITH   0 ERRORS
FILE   3 HAD:   2 BLOCKS:  MAX  1600 MIN  1440 WITH   0 ERRORS
FILE   4 HAD:   3 BLOCKS:  MAX  1600 MIN   640 WITH   0 ERRORS
FILE   5 HAD:   5 BLOCKS:  MAX  1600 MIN   640 WITH   0 ERRORS   7/15/80
FILE   6 HAD:   7 BLOCKS:  MAX  1600 MIN   320 WITH   0 ERRORS
FILE   7 HAD:   9 BLOCKS:  MAX  1600 MIN  1520 WITH   0 ERRORS
FILE   8 HAD:   8 BLOCKS:  MAX  1600 MIN    80 WITH   0 ERRORS
FILE   9 HAD:   1 BLOCKS:  MAX   640 MIN   640 WITH   0 ERRORS
FILE  10 HAD:   2 BLOCKS:  MAX  1600 MIN  1440 WITH   0 ERRORS
FILE  11 HAD:   3 BLOCKS:  MAX  1600 MIN    80 WITH   0 ERRORS
FILE  12 HAD:   3 BLOCKS:  MAX  1600 MIN   400 WITH   0 ERRORS   7/16/80
FILE  13 HAD:   3 BLOCKS:  MAX  1600 MIN   800 WITH   0 ERRORS
FILE  14 HAD:  12 BLOCKS:  MAX  1600 MIN   880 WITH   0 ERRORS
FILE  15 HAD:   8 BLOCKS:  MAX  1600 MIN  1520 WITH   0 ERRORS
FILE  16 HAD:   8 BLOCKS:  MAX  1600 MIN   480 WITH   0 ERRORS
FILE  17 HAD:   1 BLOCKS:  MAX   560 MIN   560 WITH   0 ERRORS
FILE  18 HAD:   2 BLOCKS:  MAX  1600 MIN   480 WITH   0 ERRORS
FILE  19 HAD:   2 BLOCKS:  MAX  1600 MIN  1440 WITH   0 ERRORS
FILE  20 HAD:   2 BLOCKS:  MAX  1600 MIN  1120 WITH   0 ERRORS   7/17/80
FILE  21 HAD:   7 BLOCKS:  MAX  1600 MIN  1520 WITH   0 ERRORS
FILE  22 HAD:  11 BLOCKS:  MAX  1600 MIN  1520 WITH   0 ERRORS
FILE  23 HAD:  10 BLOCKS:  MAX  1600 MIN   320 WITH   0 ERRORS
FILE  24 HAD:   1 BLOCKS:  MAX   960 MIN   960 WITH   0 ERRORS
FILE  25 HAD:   2 BLOCKS:  MAX  1600 MIN   160 WITH   0 ERRORS
FILE  26 HAD:   9 BLOCKS:  MAX  1600 MIN   800 WITH   0 ERRORS
FILE  27 HAD:   2 BLOCKS:  MAX  1600 MIN  1440 WITH   0 ERRORS
FILE  28 HAD:   2 BLOCKS:  MAX  1600 MIN  1440 WITH   0 ERRORS
FILE  29 HAD:   3 BLOCKS:  MAX  1600 MIN  1280 WITH   0 ERRORS   7/18/80
FILE  30 HAD:   3 BLOCKS:  MAX  1600 MIN  1040 WITH   0 ERRORS
FILE  31 HAD:  41 BLOCKS:  MAX  1600 MIN   800 WITH   0 ERRORS
FILE  32 HAD:   4 BLOCKS:  MAX  1600 MIN    80 WITH   0 ERRORS
FILE  33 HAD:   5 BLOCKS:  MAX  1600 MIN  1120 WITH   0 ERRORS
FILE  34 HAD:  12 BLOCKS:  MAX  1600 MIN   960 WITH   0 ERRORS
FILE  35 HAD:   8 BLOCKS:  MAX  1600 MIN  1040 WITH   0 ERRORS
FILE  36 HAD:   1 BLOCKS:  MAX   480 MIN   480 WITH   0 ERRORS
FILE  37 HAD:   3 BLOCKS:  MAX  1600 MIN  1600 WITH   0 ERRORS
FILE  38 HAD:   2 BLOCKS:  MAX  1600 MIN  1440 WITH   0 ERRORS   7/19/80
FILE  39 HAD:   2 BLOCKS:  MAX  1600 MIN   640 WITH   0 ERRORS
FILE  40 HAD:  11 BLOCKS:  MAX  1600 MIN  1120 WITH   0 ERRORS
FILE  41 HAD:   9 BLOCKS:  MAX  1600 MIN   160 WITH   0 ERRORS
FILE  42 HAD:   1 BLOCKS:  MAX  1440 MIN  1440 WITH   0 ERRORS
FILE  43 HAD:   2 BLOCKS:  MAX  1600 MIN  1040 WITH   0 ERRORS
FILE  44 HAD:   4 BLOCKS:  MAX  1600 MIN   240 WITH   0 ERRORS
FILE  45 HAD:  16 BLOCKS:  MAX  1600 MIN  1120 WITH   0 ERRORS
FILE  46 HAD:   9 BLOCKS:  MAX  1600 MIN   560 WITH   0 ERRORS
FILE  47 HAD:   4 BLOCKS:  MAX  1600 MIN  1600 WITH   0 ERRORS
FILE  48 HAD:   2 BLOCKS:  MAX  1600 MIN  1440 WITH   0 ERRORS
FILE  49 HAD:   3 BLOCKS:  MAX  1600 MIN   640 WITH   0 ERRORS
FILE  50 HAD:   3 BLOCKS:  MAX  1600 MIN   960 WITH   0 ERRORS   7/20/80
FILE  51 HAD:   1 BLOCKS:  MAX  1360 MIN  1360 WITH   0 ERRORS
FILE  52 HAD:   3 BLOCKS:  MAX  1600 MIN  1280 WITH   0 ERRORS
FILE  53 HAD:   7 BLOCKS:  MAX  1600 MIN   800 WITH   0 ERRORS
FILE  54 HAD:   4 BLOCKS:  MAX  1600 MIN   640 WITH   0 ERRORS
FILE  55 HAD:   6 BLOCKS:  MAX  1600 MIN   640 WITH   0 ERRORS
FILE  56 HAD:   8 BLOCKS:  MAX  1600 MIN   800 WITH   0 ERRORS
FILE  57 HAD:  11 BLOCKS:  MAX  1600 MIN  1280 WITH   0 ERRORS
FILE  58 HAD:   9 BLOCKS:  MAX  1600 MIN  1200 WITH   0 ERRORS
FILE  59 HAD:   8 BLOCKS:  MAX  1600 MIN   720 WITH   0 ERRORS
FILE  60 HAD:   1 BLOCKS:  MAX   960 MIN   960 WITH   0 ERRORS   7/21/80
FILE  61 HAD:   3 BLOCKS:  MAX  1600 MIN  1600 WITH   0 ERRORS
```

continued

```
FILE    62 HAD:      2 BLOCKS:    MAX   1600 MIN  1440 WITH      0 ERRORS
FILE    63 HAD:      2 BLOCKS:    MAX   1600 MIN  1360 WITH      0 ERRORS
FILE    64 HAD:     20 BLOCKS:    MAX   1600 MIN   960 WITH      0 ERRORS
FILE    65 HAD:      4 BLOCKS:    MAX   1600 MIN    80 WITH      0 ERRORS
FILE    66 HAD:      3 BLOCKS:    MAX   1600 MIN  1120 WITH      0 ERRORS
FILE    67 HAD:      5 BLOCKS:    MAX   1600 MIN   320 WITH      0 ERRORS     7/21/80
FILE    68 HAD:      3 BLOCKS:    MAX   1600 MIN  1520 WITH      0 ERRORS      (cont.)
FILE    69 HAD:     21 BLOCKS:    MAX   1600 MIN   400 WITH      0 ERRORS
FILE    70 HAD:     11 BLOCKS:    MAX   1600 MIN  1360 WITH      0 ERRORS
FILE    71 HAD:      8 BLOCKS:    MAX   1600 MIN   400 WITH      0 ERRORS
FILE    72 HAD:      1 BLOCKS:    MAX    480 MIN   480 WITH      0 ERRORS
FILE    73 HAD:      2 BLOCKS:    MAX   1600 MIN  1440 WITH      0 ERRORS
FILE    74 HAD:      2 BLOCKS:    MAX   1600 MIN   720 WITH      0 ERRORS
FILE    75 HAD:    114 BLOCKS:    MAX   1600 MIN   400 WITH      0 ERRORS     7/22/80
FILE    76 HAD:     11 BLOCKS:    MAX   1600 MIN   480 WITH      0 ERRORS
FILE    77 HAD:      9 BLOCKS:    MAX   1600 MIN   640 WITH      0 ERRORS
FILE    78 HAD:      1 BLOCKS:    MAX    720 MIN   720 WITH      0 ERRORS
FILE    79 HAD:     27 BLOCKS:    MAX   1600 MIN  1520 WITH      0 ERRORS
FILE    80 HAD:      1 BLOCKS:    MAX   1360 MIN  1360 WITH      0 ERRORS
FILE    81 HAD:      2 BLOCKS:    MAX   1600 MIN  1440 WITH      0 ERRORS
FILE    82 HAD:      2 BLOCKS:    MAX   1600 MIN   720 WITH      0 ERRORS     7/23/80
FILE    83 HAD:     19 BLOCKS:    MAX   1600 MIN   560 WITH      0 ERRORS
FILE    84 HAD:     89 BLOCKS:    MAX   1600 MIN   720 WITH      0 ERRORS
FILE    85 HAD:     10 BLOCKS:    MAX   1600 MIN   720 WITH      0 ERRORS
FILE    86 HAD:      8 BLOCKS:    MAX   1600 MIN   400 WITH      0 ERRORS
FILE    87 HAD:      2 BLOCKS:    MAX   1600 MIN   560 WITH      0 ERRORS
FILE    88 HAD:     84 BLOCKS:    MAX   1600 MIN   400 WITH      0 ERRORS
FILE    89 HAD:     55 BLOCKS:    MAX   1600 MIN   320 WITH      0 ERRORS
FILE    90 HAD:      9 BLOCKS:    MAX   1600 MIN   560 WITH      0 ERRORS
FILE    91 HAD:      3 BLOCKS:    MAX   1600 MIN   480 WITH      0 ERRORS
FILE    92 HAD:     65 BLOCKS:    MAX   1600 MIN  1200 WITH      0 ERRORS
FILE    93 HAD:      3 BLOCKS:    MAX   1600 MIN   560 WITH      0 ERRORS
FILE    94 HAD:     15 BLOCKS:    MAX   1600 MIN   800 WITH      0 ERRORS
FILE    95 HAD:      8 BLOCKS:    MAX   1600 MIN  1200 WITH      0 ERRORS
FILE    96 HAD:      2 BLOCKS:    MAX   1600 MIN  1440 WITH      0 ERRORS
FILE    97 HAD:      3 BLOCKS:    MAX   1600 MIN  1120 WITH      0 ERRORS
FILE    98 HAD:      4 BLOCKS:    MAX   1600 MIN    80 WITH      0 ERRORS
FILE    99 HAD:      2 BLOCKS:    MAX   1600 MIN   320 WITH      0 ERRORS
FILE   100 HAD:      2 BLOCKS:    MAX   1600 MIN   880 WITH      0 ERRORS     7/24/80
FILE   101 HAD:      3 BLOCKS:    MAX   1600 MIN   320 WITH      0 ERRORS
FILE   102 HAD:      3 BLOCKS:    MAX   1600 MIN  1120 WITH      0 ERRORS
FILE   103 HAD:      3 BLOCKS:    MAX   1600 MIN  1280 WITH      0 ERRORS
FILE   104 HAD:      3 BLOCKS:    MAX   1600 MIN   640 WITH      0 ERRORS
FILE   105 HAD:      4 BLOCKS:    MAX   1600 MIN  1280 WITH      0 ERRORS
FILE   106 HAD:     19 BLOCKS:    MAX   1600 MIN  1200 WITH      0 ERRORS
FILE   107 HAD:      7 BLOCKS:    MAX   1600 MIN  1600 WITH      0 ERRORS
FILE   108 HAD:     10 BLOCKS:    MAX   1600 MIN   800 WITH      0 ERRORS
FILE   109 HAD:      8 BLOCKS:    MAX   1600 MIN   880 WITH      0 ERRORS
FILE   110 HAD:     12 BLOCKS:    MAX   1600 MIN  1360 WITH      0 ERRORS
FILE   111 HAD:    114 BLOCKS:    MAX   1600 MIN   400 WITH      0 ERRORS
FILE   112 HAD:     10 BLOCKS:    MAX   1600 MIN  1040 WITH      0 ERRORS
FILE   113 HAD:      7 BLOCKS:    MAX   1600 MIN   560 WITH      0 ERRORS
FILE   114 HAD:      2 BLOCKS:    MAX   1600 MIN   960 WITH      0 ERRORS
FILE   115 HAD:     68 BLOCKS:    MAX   1600 MIN  1040 WITH      0 ERRORS
FILE   116 HAD:     53 BLOCKS:    MAX   1600 MIN  1440 WITH      0 ERRORS
FILE   117 HAD:     30 BLOCKS:    MAX   1600 MIN   720 WITH      0 ERRORS
FILE   118 HAD:     66 BLOCKS:    MAX   1600 MIN   560 WITH      0 ERRORS     7/25/80
FILE   119 HAD:      9 BLOCKS:    MAX   1600 MIN  1520 WITH      0 ERRORS
FILE   120 HAD:      2 BLOCKS:    MAX   1600 MIN  1440 WITH      0 ERRORS
FILE   121 HAD:    118 BLOCKS:    MAX   1600 MIN   800 WITH      0 ERRORS
FILE   122 HAD:      4 BLOCKS:    MAX   1600 MIN   880 WITH      0 ERRORS
```

continued

```
FILE  123 HAD:    26 BLOCKS:   MAX   1600 MIN    480 WITH      0 ERRORS
FILE  124 HAD:    14 BLOCKS:   MAX   1600 MIN    240 WITH      0 ERRORS
FILE  125 HAD:     3 BLOCKS:   MAX   1600 MIN    480 WITH      0 ERRORS
FILE  126 HAD:     2 BLOCKS:   MAX   1600 MIN   1440 WITH      0 ERRORS
FILE  127 HAD:     3 BLOCKS:   MAX   1600 MIN   1040 WITH      0 ERRORS
FILE  128 HAD:     2 BLOCKS:   MAX   1600 MIN   1440 WITH      0 ERRORS
FILE  129 HAD:     2 BLOCKS:   MAX   1600 MIN   1360 WITH      0 ERRORS
FILE  130 HAD:     2 BLOCKS:   MAX   1600 MIN    560 WITH      0 ERRORS
FILE  131 HAD:    13 BLOCKS:   MAX   1600 MIN   1440 WITH      0 ERRORS
FILE  132 HAD:     3 BLOCKS:   MAX   1600 MIN    160 WITH      0 ERRORS
FILE  133 HAD:     3 BLOCKS:   MAX   1600 MIN     80 WITH      0 ERRORS
FILE  134 HAD:     2 BLOCKS:   MAX   1600 MIN   1440 WITH      0 ERRORS    7/25/80
FILE  135 HAD:     4 BLOCKS:   MAX   1600 MIN   1600 WITH      0 ERRORS     (cont.)
FILE  136 HAD:    17 BLOCKS:   MAX   1600 MIN   1040 WITH      0 ERRORS
FILE  137 HAD:     7 BLOCKS:   MAX   1600 MIN   1360 WITH      0 ERRORS
FILE  138 HAD:    10 BLOCKS:   MAX   1600 MIN    880 WITH      0 ERRORS
FILE  139 HAD:     7 BLOCKS:   MAX   1600 MIN    240 WITH      0 ERRORS
FILE  140 HAD:     6 BLOCKS:   MAX   1600 MIN    400 WITH      0 ERRORS
FILE  141 HAD:     9 BLOCKS:   MAX   1600 MIN    560 WITH      0 ERRORS
FILE  142 HAD:    10 BLOCKS:   MAX   1600 MIN    960 WITH      0 ERRORS
FILE  143 HAD:   114 BLOCKS:   MAX   1600 MIN    400 WITH      0 ERRORS
FILE  144 HAD:    12 BLOCKS:   MAX   1600 MIN    240 WITH      0 ERRORS
FILE  145 HAD:     7 BLOCKS:   MAX   1600 MIN   1520 WITH      0 ERRORS
---------------------------------------------------------------------------
FILE  146 HAD:     1 BLOCKS:   MAX   1440 MIN   1440 WITH      0 ERRORS
FILE  147 HAD:   118 BLOCKS:   MAX   1600 MIN    960 WITH      0 ERRORS
FILE  148 HAD:     3 BLOCKS:   MAX   1600 MIN   1440 WITH      0 ERRORS
FILE  149 HAD:     2 BLOCKS:   MAX   1600 MIN   1440 WITH      0 ERRORS
FILE  150 HAD:     3 BLOCKS:   MAX   1600 MIN    320 WITH      0 ERRORS
FILE  151 HAD:     3 BLOCKS:   MAX   1600 MIN    320 WITH      0 ERRORS
FILE  152 HAD:     2 BLOCKS:   MAX   1600 MIN   1600 WITH      0 ERRORS
FILE  153 HAD:     3 BLOCKS:   MAX   1600 MIN    480 WITH      0 ERRORS
FILE  154 HAD:     3 BLOCKS:   MAX   1600 MIN    720 WITH      0 ERRORS
FILE  155 HAD:     3 BLOCKS:   MAX   1600 MIN     80 WITH      0 ERRORS    7/26/80
FILE  156 HAD:     2 BLOCKS:   MAX   1600 MIN    160 WITH      0 ERRORS
FILE  157 HAD:     4 BLOCKS:   MAX   1600 MIN    640 WITH      0 ERRORS
FILE  158 HAD:    13 BLOCKS:   MAX   1600 MIN    400 WITH      0 ERRORS
FILE  159 HAD:     8 BLOCKS:   MAX   1600 MIN    480 WITH      0 ERRORS
FILE  160 HAD:    11 BLOCKS:   MAX   1600 MIN   1520 WITH      0 ERRORS
FILE  161 HAD:   114 BLOCKS:   MAX   1600 MIN    400 WITH      0 ERRORS
FILE  162 HAD:    12 BLOCKS:   MAX   1600 MIN    640 WITH      0 ERRORS
FILE  163 HAD:     9 BLOCKS:   MAX   1600 MIN     80 WITH      0 ERRORS
---------------------------------------------------------------------------
FILE  164 HAD:     1 BLOCKS:   MAX    960 MIN    960 WITH      0 ERRORS
FILE  165 HAD:     2 BLOCKS:   MAX   1600 MIN   1200 WITH      0 ERRORS
FILE  166 HAD:     3 BLOCKS:   MAX   1600 MIN   1200 WITH      0 ERRORS
FILE  167 HAD:     8 BLOCKS:   MAX   1600 MIN    160 WITH      0 ERRORS
FILE  168 HAD:    18 BLOCKS:   MAX   1600 MIN   1440 WITH      0 ERRORS
FILE  169 HAD:     5 BLOCKS:   MAX   1600 MIN     80 WITH      0 ERRORS
FILE  170 HAD:    10 BLOCKS:   MAX   1600 MIN    720 WITH      0 ERRORS    7/27/80
FILE  171 HAD:     2 BLOCKS:   MAX   1600 MIN   1440 WITH      0 ERRORS
FILE  172 HAD:     2 BLOCKS:   MAX   1600 MIN   1520 WITH      0 ERRORS
FILE  173 HAD:    70 BLOCKS:   MAX   1600 MIN   1360 WITH      0 ERRORS
FILE  174 HAD:    11 BLOCKS:   MAX   1600 MIN   1040 WITH      0 ERRORS
FILE  175 HAD:     9 BLOCKS:   MAX   1600 MIN    640 WITH      0 ERRORS
---------------------------------------------------------------------------
FILE  176 HAD:     1 BLOCKS:   MAX    720 MIN    720 WITH      0 ERRORS
FILE  177 HAD:     2 BLOCKS:   MAX   1600 MIN   1200 WITH      0 ERRORS
FILE  178 HAD:     5 BLOCKS:   MAX   1600 MIN   1440 WITH      0 ERRORS
FILE  179 HAD:     3 BLOCKS:   MAX   1600 MIN   1520 WITH      0 ERRORS    7/28/80
FILE  180 HAD:     2 BLOCKS:   MAX   1600 MIN   1440 WITH      0 ERRORS
FILE  181 HAD:     2 BLOCKS:   MAX   1600 MIN   1120 WITH      0 ERRORS
FILE  182 HAD:   114 BLOCKS:   MAX   1600 MIN    400 WITH      0 ERRORS
FILE  183 HAD:     8 BLOCKS:   MAX   1600 MIN   1040 WITH      0 ERRORS
```

continued

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FILE  184 HAD:     7 BLOCKS:   MAX  1600 MIN   1520 WITH      0 ERRORS
FILE  185 HAD:     1 BLOCKS:   MAX  1440 MIN   1440 WITH      0 ERRORS
FILE  186 HAD:    76 BLOCKS:   MAX  1600 MIN    560 WITH      0 ERRORS
FILE  187 HAD:     3 BLOCKS:   MAX  1600 MIN    960 WITH      0 ERRORS
FILE  188 HAD:     2 BLOCKS:   MAX  1600 MIN   1440 WITH      0 ERRORS
FILE  189 HAD:     2 BLOCKS:   MAX  1600 MIN   1040 WITH      0 ERRORS
FILE  190 HAD:     2 BLOCKS:   MAX  1600 MIN    320 WITH      0 ERRORS
FILE  191 HAD:     2 BLOCKS:   MAX  1600 MIN   1200 WITH      0 ERRORS
FILE  192 HAD:     2 BLOCKS:   MAX  1600 MIN    400 WITH      0 ERRORS
FILE  193 HAD:     2 BLOCKS:   MAX  1600 MIN    560 WITH      0 ERRORS     7/29/80
FILE  194 HAD:     2 BLOCKS:   MAX  1600 MIN    480 WITH      0 ERRORS
FILE  195 HAD:     2 BLOCKS:   MAX  1600 MIN    560 WITH      0 ERRORS
FILE  196 HAD:     2 BLOCKS:   MAX  1600 MIN   1120 WITH      0 ERRORS
FILE  197 HAD:     2 BLOCKS:   MAX  1600 MIN   1280 WITH      0 ERRORS
FILE  198 HAD:     2 BLOCKS:   MAX  1600 MIN   1200 WITH      0 ERRORS
FILE  199 HAD:    16 BLOCKS:   MAX  1600 MIN     80 WITH      0 ERRORS
FILE  200 HAD:   114 BLOCKS:   MAX  1600 MIN    400 WITH      0 ERRORS
FILE  201 HAD:    12 BLOCKS:   MAX  1600 MIN    560 WITH      0 ERRORS
FILE  202 HAD:    10 BLOCKS:   MAX  1600 MIN    400 WITH      0 ERRORS
FILE  203 HAD:     2 BLOCKS:   MAX  1600 MIN    880 WITH      0 ERRORS
FILE  204 HAD:   705 BLOCKS:   MAX  1600 MIN    800 WITH      0 ERRORS
FILE  205 HAD:   186 BLOCKS:   MAX  1600 MIN   1520 WITH      0 ERRORS
FILE  206 HAD:   118 BLOCKS:   MAX  1600 MIN    640 WITH      0 ERRORS
FILE  207 HAD:    92 BLOCKS:   MAX  1600 MIN   1520 WITH      0 ERRORS
FILE  208 HAD:   208 BLOCKS:   MAX  1600 MIN    400 WITH      0 ERRORS
FILE  209 HAD:   157 BLOCKS:   MAX  1600 MIN    400 WITH      0 ERRORS
FILE  210 HAD:    96 BLOCKS:   MAX  1600 MIN   1440 WITH      0 ERRORS
FILE  211 HAD:    99 BLOCKS:   MAX  1600 MIN    560 WITH      0 ERRORS
FILE  212 HAD:   325 BLOCKS:   MAX  1600 MIN   1120 WITH      0 ERRORS
FILE  213 HAD:     3 BLOCKS:   MAX  1600 MIN   1120 WITH      0 ERRORS
FILE  214 HAD:     2 BLOCKS:   MAX  1600 MIN   1440 WITH      0 ERRORS
FILE  215 HAD:     3 BLOCKS:   MAX  1600 MIN    640 WITH      0 ERRORS
FILE  216 HAD:     3 BLOCKS:   MAX  1600 MIN    240 WITH      0 ERRORS
FILE  217 HAD:     2 BLOCKS:   MAX  1600 MIN   1200 WITH      0 ERRORS     7/30/80
FILE  218 HAD:     2 BLOCKS:   MAX  1600 MIN    480 WITH      0 ERRORS
FILE  219 HAD:     2 BLOCKS:   MAX  1600 MIN   1520 WITH      0 ERRORS
FILE  220 HAD:     3 BLOCKS:   MAX  1600 MIN    640 WITH      0 ERRORS
FILE  221 HAD:     4 BLOCKS:   MAX  1600 MIN    800 WITH      0 ERRORS
FILE  222 HAD:     2 BLOCKS:   MAX  1600 MIN   1280 WITH      0 ERRORS
FILE  223 HAD:     3 BLOCKS:   MAX  1600 MIN    480 WITH      0 ERRORS
FILE  224 HAD:     1 BLOCKS:   MAX  1360 MIN   1360 WITH      0 ERRORS
FILE  225 HAD:     2 BLOCKS:   MAX  1600 MIN   1520 WITH      0 ERRORS
FILE  226 HAD:     3 BLOCKS:   MAX  1600 MIN    480 WITH      0 ERRORS
FILE  227 HAD:     5 BLOCKS:   MAX  1600 MIN    720 WITH      0 ERRORS
FILE  228 HAD:    36 BLOCKS:   MAX  1600 MIN    800 WITH      0 ERRORS
FILE  229 HAD:     9 BLOCKS:   MAX  1600 MIN   1280 WITH      0 ERRORS
FILE  230 HAD:    17 BLOCKS:   MAX  1600 MIN   1440 WITH      0 ERRORS
FILE  231 HAD:   114 BLOCKS:   MAX  1600 MIN    400 WITH      0 ERRORS
FILE  232 HAD:    11 BLOCKS:   MAX  1600 MIN   1040 WITH      0 ERRORS
FILE  233 HAD:     8 BLOCKS:   MAX  1600 MIN   1040 WITH      0 ERRORS
FILE  234 HAD:     2 BLOCKS:   MAX  1600 MIN    800 WITH      0 ERRORS
FILE  235 HAD:   530 BLOCKS:   MAX  1600 MIN    640 WITH      0 ERRORS
FILE  236 HAD:   168 BLOCKS:   MAX  1600 MIN   1280 WITH      0 ERRORS
FILE  237 HAD:   172 BLOCKS:   MAX  1600 MIN    160 WITH      0 ERRORS
FILE  238 HAD:   433 BLOCKS:   MAX  1600 MIN    320 WITH      0 ERRORS
FILE  239 HAD:     7 BLOCKS:   MAX  1600 MIN   1360 WITH      0 ERRORS     7/31/80
FILE  240 HAD:     8 BLOCKS:   MAX  1600 MIN   1200 WITH      0 ERRORS
FILE  241 HAD:     3 BLOCKS:   MAX  1600 MIN   1600 WITH      0 ERRORS
FILE  242 HAD:     3 BLOCKS:   MAX  1600 MIN   1520 WITH      0 ERRORS
FILE  243 HAD:   229 BLOCKS:   MAX  1600 MIN   1440 WITH      0 ERRORS
FILE  244 HAD:     4 BLOCKS:   MAX  1600 MIN    480 WITH      0 ERRORS
```

continued

```
FILE  245 HAD:       2 BLOCKS:    MAX   1600 MIN   1440 WITH      0 ERRORS
FILE  246 HAD:       3 BLOCKS:    MAX   1600 MIN    160 WITH      0 ERRORS
FILE  247 HAD:       4 BLOCKS:    MAX   1600 MIN    240 WITH      0 ERRORS
FILE  248 HAD:       2 BLOCKS:    MAX   1600 MIN   1200 WITH      0 ERRORS
FILE  249 HAD:       2 BLOCKS:    MAX   1600 MIN   1280 WITH      0 ERRORS
FILE  250 HAD:       2 BLOCKS:    MAX   1600 MIN    800 WITH      0 ERRORS
FILE  251 HAD:       3 BLOCKS:    MAX   1600 MIN    800 WITH      0 ERRORS
FILE  252 HAD:       2 BLOCKS:    MAX   1600 MIN    960 WITH      0 ERRORS
FILE  253 HAD:       2 BLOCKS:    MAX   1600 MIN   1520 WITH      0 ERRORS
FILE  254 HAD:       2 BLOCKS:    MAX   1600 MIN   1520 WITH      0 ERRORS
FILE  255 HAD:       2 BLOCKS:    MAX   1600 MIN   1280 WITH      0 ERRORS
FILE  256 HAD:       3 BLOCKS:    MAX   1600 MIN     80 WITH      0 ERRORS
FILE  257 HAD:      12 BLOCKS:    MAX   1600 MIN    640 WITH      0 ERRORS
FILE  258 HAD:      11 BLOCKS:    MAX   1600 MIN   1440 WITH      0 ERRORS
FILE  259 HAD:       6 BLOCKS:    MAX   1600 MIN    560 WITH      0 ERRORS
FILE  260 HAD:      13 BLOCKS:    MAX   1600 MIN    720 WITH      0 ERRORS
FILE  261 HAD:      95 BLOCKS:    MAX   1600 MIN   1040 WITH      0 ERRORS
FILE  262 HAD:      12 BLOCKS:    MAX   1600 MIN     80 WITH      0 ERRORS
FILE  263 HAD:      11 BLOCKS:    MAX   1600 MIN    560 WITH      0 ERRORS
FILE  264 HAD:       1 BLOCKS:    MAX   1280 MIN   1280 WITH      0 ERRORS
FILE  265 HAD:     128 BLOCKS:    MAX   1600 MIN   1360 WITH      0 ERRORS
FILE  266 HAD:      54 BLOCKS:    MAX   1600 MIN    320 WITH      0 ERRORS
FILE  267 HAD:     102 BLOCKS:    MAX   1600 MIN    800 WITH      0 ERRORS
FILE  268 HAD:       3 BLOCKS:    MAX   1600 MIN    880 WITH      0 ERRORS
FILE  269 HAD:      18 BLOCKS:    MAX   1600 MIN    800 WITH      0 ERRORS
FILE  270 HAD:      10 BLOCKS:    MAX   1600 MIN    400 WITH      0 ERRORS
FILE  271 HAD:       4 BLOCKS:    MAX   1600 MIN    160 WITH      0 ERRORS
FILE  272 HAD:       2 BLOCKS:    MAX   1600 MIN   1440 WITH      0 ERRORS
FILE  273 HAD:       2 BLOCKS:    MAX   1600 MIN    720 WITH      0 ERRORS
FILE  274 HAD:      21 BLOCKS:    MAX   1600 MIN   1520 WITH      0 ERRORS
FILE  275 HAD:       5 BLOCKS:    MAX   1600 MIN    800 WITH      0 ERRORS
FILE  276 HAD:       7 BLOCKS:    MAX   1600 MIN   1440 WITH      0 ERRORS
FILE  277 HAD:     114 BLOCKS:    MAX   1600 MIN    400 WITH      0 ERRORS
FILE  278 HAD:      12 BLOCKS:    MAX   1600 MIN   1120 WITH      0 ERRORS
FILE  279 HAD:      11 BLOCKS:    MAX   1600 MIN   1120 WITH      0 ERRORS
FILE  280 HAD:       2 BLOCKS:    MAX   1600 MIN    720 WITH      0 ERRORS
FILE  281 HAD:     704 BLOCKS:    MAX   1600 MIN    640 WITH      0 ERRORS
FILE  282 HAD:     154 BLOCKS:    MAX   1600 MIN   1120 WITH      0 ERRORS
FILE  283 HAD:     266 BLOCKS:    MAX   1600 MIN   1200 WITH      0 ERRORS
FILE  284 HAD:      86 BLOCKS:    MAX   1600 MIN    880 WITH      0 ERRORS
FILE  285 HAD:      10 BLOCKS:    MAX   1600 MIN   1600 WITH      0 ERRORS
FILE  286 HAD:       2 BLOCKS:    MAX   1600 MIN   1200 WITH      0 ERRORS
FILE  287 HAD:     218 BLOCKS:    MAX   1600 MIN    160 WITH      0 ERRORS
FILE  288 HAD:       4 BLOCKS:    MAX   1600 MIN    560 WITH      0 ERRORS
FILE  289 HAD:      12 BLOCKS:    MAX   1600 MIN   1120 WITH      0 ERRORS
FILE  290 HAD:       7 BLOCKS:    MAX   1600 MIN    560 WITH      0 ERRORS
FILE  291 HAD:       3 BLOCKS:    MAX   1600 MIN   1120 WITH      0 ERRORS
FILE  292 HAD:       2 BLOCKS:    MAX   1600 MIN   1440 WITH      0 ERRORS
FILE  293 HAD:       3 BLOCKS:    MAX   1600 MIN    240 WITH      0 ERRORS
FILE  294 HAD:       3 BLOCKS:    MAX   1600 MIN    720 WITH      0 ERRORS
FILE  295 HAD:       2 BLOCKS:    MAX   1600 MIN    560 WITH      0 ERRORS
FILE  296 HAD:       2 BLOCKS:    MAX   1600 MIN   1120 WITH      0 ERRORS
FILE  297 HAD:       2 BLOCKS:    MAX   1600 MIN    720 WITH      0 ERRORS
FILE  298 HAD:       2 BLOCKS:    MAX   1600 MIN    320 WITH      0 ERRORS
FILE  299 HAD:       1 BLOCKS:    MAX   1360 MIN   1360 WITH      0 ERRORS
FILE  300 HAD:       2 BLOCKS:    MAX   1600 MIN   1280 WITH      0 ERRORS
FILE  301 HAD:       2 BLOCKS:    MAX   1600 MIN    800 WITH      0 ERRORS
FILE  302 HAD:       6 BLOCKS:    MAX   1600 MIN    320 WITH      0 ERRORS
FILE  303 HAD:       7 BLOCKS:    MAX   1600 MIN    160 WITH      0 ERRORS
FILE  304 HAD:       5 BLOCKS:    MAX   1600 MIN   1040 WITH      0 ERRORS
FILE  305 HAD:      12 BLOCKS:    MAX   1600 MIN   1520 WITH      0 ERRORS
```

7/31/80 (cont.)

8/01/80

8/02/80

continued

```
FILE  306 HAD:   111 BLOCKS:   MAX  1600 MIN   240 WITH    0 ERRORS
FILE  307 HAD:    11 BLOCKS:   MAX  1600 MIN  1440 WITH    0 ERRORS   8/02/80
FILE  308 HAD:    10 BLOCKS:   MAX  1600 MIN  1600 WITH    0 ERRORS
FILE  309 HAD:     1 BLOCKS:   MAX   480 MIN   480 WITH    0 ERRORS
FILE  310 HAD:     2 BLOCKS:   MAX  1600 MIN  1440 WITH    0 ERRORS
FILE  311 HAD:     2 BLOCKS:   MAX  1600 MIN   480 WITH    0 ERRORS
FILE  312 HAD:   114 BLOCKS:   MAX  1600 MIN   400 WITH    0 ERRORS   8/03/80
FILE  313 HAD:    11 BLOCKS:   MAX  1600 MIN  1200 WITH    0 ERRORS
FILE  314 HAD:    10 BLOCKS:   MAX  1600 MIN   960 WITH    0 ERRORS
FILE  315 HAD:     2 BLOCKS:   MAX  1600 MIN  1440 WITH    0 ERRORS
FILE  316 HAD:   712 BLOCKS:   MAX  1600 MIN   960 WITH    0 ERRORS
FILE  317 HAD:   544 BLOCKS:   MAX  1600 MIN  1600 WITH    0 ERRORS
FILE  318 HAD:   107 BLOCKS:   MAX  1600 MIN   240 WITH    0 ERRORS
FILE  319 HAD:   146 BLOCKS:   MAX  1600 MIN  1440 WITH    0 ERRORS
FILE  320 HAD:   126 BLOCKS:   MAX  1600 MIN   240 WITH    0 ERRORS
FILE  321 HAD:    93 BLOCKS:   MAX  1600 MIN   960 WITH    0 ERRORS
FILE  322 HAD:    22 BLOCKS:   MAX  1600 MIN  1600 WITH    0 ERRORS
FILE  323 HAD:    23 BLOCKS:   MAX  1600 MIN  1520 WITH    0 ERRORS
FILE  324 HAD:     3 BLOCKS:   MAX  1600 MIN  1120 WITH    0 ERRORS
FILE  325 HAD:     3 BLOCKS:   MAX  1600 MIN  1440 WITH    0 ERRORS
FILE  326 HAD:   200 BLOCKS:   MAX  1600 MIN  1120 WITH    0 ERRORS
FILE  327 HAD:     5 BLOCKS:   MAX  1600 MIN   560 WITH    0 ERRORS
FILE  328 HAD:    20 BLOCKS:   MAX  1600 MIN   800 WITH    0 ERRORS
FILE  329 HAD:    11 BLOCKS:   MAX  1600 MIN   400 WITH    0 ERRORS
FILE  330 HAD:     3 BLOCKS:   MAX  1600 MIN   800 WITH    0 ERRORS
FILE  331 HAD:     2 BLOCKS:   MAX  1600 MIN  1440 WITH    0 ERRORS
FILE  332 HAD:     2 BLOCKS:   MAX  1600 MIN   800 WITH    0 ERRORS
FILE  333 HAD:     2 BLOCKS:   MAX  1600 MIN   240 WITH    0 ERRORS   8/04/80
FILE  334 HAD:     2 BLOCKS:   MAX  1600 MIN   320 WITH    0 ERRORS
FILE  335 HAD:     3 BLOCKS:   MAX  1600 MIN    80 WITH    0 ERRORS
FILE  336 HAD:     2 BLOCKS:   MAX  1600 MIN  1440 WITH    0 ERRORS
FILE  337 HAD:     2 BLOCKS:   MAX  1600 MIN  1280 WITH    0 ERRORS
FILE  338 HAD:     2 BLOCKS:   MAX  1600 MIN   880 WITH    0 ERRORS
FILE  339 HAD:     2 BLOCKS:   MAX  1600 MIN   640 WITH    0 ERRORS
FILE  340 HAD:     2 BLOCKS:   MAX  1600 MIN   560 WITH    0 ERRORS
FILE  341 HAD:     2 BLOCKS:   MAX  1600 MIN   560 WITH    0 ERRORS
FILE  342 HAD:     1 BLOCKS:   MAX  1520 MIN  1520 WITH    0 ERRORS
FILE  343 HAD:     2 BLOCKS:   MAX  1600 MIN   400 WITH    0 ERRORS
FILE  344 HAD:     2 BLOCKS:   MAX  1600 MIN   960 WITH    0 ERRORS
FILE  345 HAD:    25 BLOCKS:   MAX  1600 MIN  1040 WITH    0 ERRORS
FILE  346 HAD:     4 BLOCKS:   MAX  1600 MIN  1600 WITH    0 ERRORS
FILE  347 HAD:     8 BLOCKS:   MAX  1600 MIN   240 WITH    0 ERRORS
FILE  348 HAD:    10 BLOCKS:   MAX  1600 MIN   400 WITH    0 ERRORS
FILE  349 HAD:    16 BLOCKS:   MAX  1600 MIN  1200 WITH    0 ERRORS
FILE  350 HAD:   114 BLOCKS:   MAX  1600 MIN   400 WITH    0 ERRORS
FILE  351 HAD:    12 BLOCKS:   MAX  1600 MIN   160 WITH    0 ERRORS
FILE  352 HAD:    10 BLOCKS:   MAX  1600 MIN  1520 WITH    0 ERRORS
FILE  353 HAD:     1 BLOCKS:   MAX  1600 MIN  1600 WITH    0 ERRORS
FILE  354 HAD:   678 BLOCKS:   MAX  1600 MIN   320 WITH    0 ERRORS
FILE  355 HAD:   104 BLOCKS:   MAX  1600 MIN   720 WITH    0 ERRORS
FILE  356 HAD:     9 BLOCKS:   MAX  1600 MIN   320 WITH    0 ERRORS
FILE  357 HAD:     3 BLOCKS:   MAX  1600 MIN  1120 WITH    0 ERRORS
FILE  358 HAD:     3 BLOCKS:   MAX  1600 MIN  1360 WITH    0 ERRORS
FILE  359 HAD:     4 BLOCKS:   MAX  1600 MIN    80 WITH    0 ERRORS
FILE  360 HAD:     4 BLOCKS:   MAX  1600 MIN   240 WITH    0 ERRORS   8/05/80
FILE  361 HAD:    14 BLOCKS:   MAX  1600 MIN   480 WITH    0 ERRORS
FILE  362 HAD:     8 BLOCKS:   MAX  1600 MIN   240 WITH    0 ERRORS
FILE  363 HAD:     3 BLOCKS:   MAX  1600 MIN   960 WITH    0 ERRORS
FILE  364 HAD:     2 BLOCKS:   MAX  1600 MIN  1440 WITH    0 ERRORS
FILE  365 HAD:     3 BLOCKS:   MAX  1600 MIN   720 WITH    0 ERRORS
FILE  366 HAD:     2 BLOCKS:   MAX  1600 MIN   960 WITH    0 ERRORS
```

continued

```
FILE  367 HAD:     1 BLOCKS:   MAX   1280 MIN   1280 WITH     0 ERRORS
FILE  368 HAD:     6 BLOCKS:   MAX   1600 MIN    480 WITH     0 ERRORS
FILE  369 HAD:     7 BLOCKS:   MAX   1600 MIN   1440 WITH     0 ERRORS
FILE  370 HAD:   114 BLOCKS:   MAX   1600 MIN    400 WITH     0 ERRORS   8/05/80
FILE  371 HAD:    11 BLOCKS:   MAX   1600 MIN   1600 WITH     0 ERRORS
FILE  372 HAD:    10 BLOCKS:   MAX   1600 MIN   1280 WITH     0 ERRORS    (cont.)
FILE  373 HAD:     1 BLOCKS:   MAX    880 MIN    880 WITH     0 ERRORS
FILE  374 HAD:     4 BLOCKS:   MAX   1600 MIN    880 WITH     0 ERRORS
FILE  375 HAD:    35 BLOCKS:   MAX   1600 MIN    800 WITH     0 ERRORS
FILE  376 HAD:    18 BLOCKS:   MAX   1600 MIN   1200 WITH     0 ERRORS
FILE  377 HAD:     2 BLOCKS:   MAX   1600 MIN   1440 WITH     0 ERRORS
FILE  378 HAD:     5 BLOCKS:   MAX   1600 MIN    640 WITH     0 ERRORS   8/06/80
FILE  379 HAD:     3 BLOCKS:   MAX   1600 MIN    800 WITH     0 ERRORS
FILE  380 HAD:    60 BLOCKS:   MAX   1600 MIN    720 WITH     0 ERRORS
FILE  381 HAD:   103 BLOCKS:   MAX   1600 MIN    640 WITH     0 ERRORS
FILE  382 HAD:    12 BLOCKS:   MAX   1600 MIN   1040 WITH     0 ERRORS
FILE  383 HAD:     9 BLOCKS:   MAX   1600 MIN   1200 WITH     0 ERRORS
FILE  384 HAD:     2 BLOCKS:   MAX   1600 MIN   1120 WITH     0 ERRORS
FILE  385 HAD:   456 BLOCKS:   MAX   1600 MIN    960 WITH     0 ERRORS
FILE  386 HAD:   106 BLOCKS:   MAX   1600 MIN    800 WITH     0 ERRORS
FILE  387 HAD:   140 BLOCKS:   MAX   1600 MIN   1120 WITH     0 ERRORS
FILE  388 HAD:   200 BLOCKS:   MAX   1600 MIN   1120 WITH     0 ERRORS
FILE  389 HAD:   243 BLOCKS:   MAX   1600 MIN    320 WITH     0 ERRORS
FILE  390 HAD:   143 BLOCKS:   MAX   1600 MIN    320 WITH     0 ERRORS
FILE  391 HAD:     9 BLOCKS:   MAX   1600 MIN    800 WITH     0 ERRORS
FILE  392 HAD:     5 BLOCKS:   MAX   1600 MIN    240 WITH     0 ERRORS
FILE  393 HAD:     4 BLOCKS:   MAX   1600 MIN    720 WITH     0 ERRORS
FILE  394 HAD:     4 BLOCKS:   MAX   1600 MIN   1040 WITH     0 ERRORS
FILE  395 HAD:   247 BLOCKS:   MAX   1600 MIN    480 WITH     0 ERRORS
FILE  396 HAD:     2 BLOCKS:   MAX   1600 MIN   1440 WITH     0 ERRORS
FILE  397 HAD:     3 BLOCKS:   MAX   1600 MIN    320 WITH     0 ERRORS
FILE  398 HAD:     2 BLOCKS:   MAX   1600 MIN   1440 WITH     0 ERRORS
FILE  399 HAD:     7 BLOCKS:   MAX   1600 MIN    640 WITH     0 ERRORS
FILE  400 HAD:     3 BLOCKS:   MAX   1600 MIN   1200 WITH     0 ERRORS   8/07/80
FILE  401 HAD:     3 BLOCKS:   MAX   1600 MIN    560 WITH     0 ERRORS
FILE  402 HAD:     2 BLOCKS:   MAX   1600 MIN    720 WITH     0 ERRORS
FILE  403 HAD:     3 BLOCKS:   MAX   1600 MIN    560 WITH     0 ERRORS
FILE  404 HAD:     2 BLOCKS:   MAX   1600 MIN    400 WITH     0 ERRORS
FILE  405 HAD:     3 BLOCKS:   MAX   1600 MIN    400 WITH     0 ERRORS
FILE  406 HAD:     2 BLOCKS:   MAX   1600 MIN   1360 WITH     0 ERRORS
FILE  407 HAD:     3 BLOCKS:   MAX   1600 MIN    800 WITH     0 ERRORS
FILE  408 HAD:    77 BLOCKS:   MAX   1600 MIN    160 WITH     0 ERRORS
FILE  409 HAD:     5 BLOCKS:   MAX   1600 MIN    640 WITH     0 ERRORS
FILE  410 HAD:     6 BLOCKS:   MAX   1600 MIN   1280 WITH     0 ERRORS
FILE  411 HAD:     6 BLOCKS:   MAX   1600 MIN    320 WITH     0 ERRORS
FILE  412 HAD:     7 BLOCKS:   MAX   1600 MIN   1200 WITH     0 ERRORS
FILE  413 HAD:     7 BLOCKS:   MAX   1600 MIN    800 WITH     0 ERRORS
FILE  414 HAD:    11 BLOCKS:   MAX   1600 MIN    320 WITH     0 ERRORS
FILE  415 HAD:   117 BLOCKS:   MAX   1600 MIN    560 WITH     0 ERRORS
FILE  416 HAD:    12 BLOCKS:   MAX   1600 MIN    720 WITH     0 ERRORS
FILE  417 HAD:    10 BLOCKS:   MAX   1600 MIN   1520 WITH     0 ERRORS
```

END OF TABLE 8.

TABLE 9.

TAPE SCAN OF TAPE 2

```
FILE   1 HAD:     2 BLOCKS:    MAX   1600 MIN   1120 WITH      0 ERRORS
FILE   2 HAD:  1433 BLOCKS:    MAX   1600 MIN   1280 WITH      0 ERRORS
FILE   3 HAD:    26 BLOCKS:    MAX   1600 MIN    720 WITH      0 ERRORS
FILE   4 HAD:   167 BLOCKS:    MAX   1600 MIN    720 WITH      0 ERRORS
FILE   5 HAD:   110 BLOCKS:    MAX   1600 MIN   1200 WITH      0 ERRORS
FILE   6 HAD:   193 BLOCKS:    MAX   1600 MIN   1360 WITH      0 ERRORS
FILE   7 HAD:   211 BLOCKS:    MAX   1600 MIN    160 WITH      0 ERRORS
FILE   8 HAD:     4 BLOCKS:    MAX   1600 MIN    720 WITH      0 ERRORS
FILE   9 HAD:     4 BLOCKS:    MAX   1600 MIN   1040 WITH      0 ERRORS
FILE  10 HAD:   348 BLOCKS:    MAX   1600 MIN   1120 WITH      0 ERRORS
FILE  11 HAD:     3 BLOCKS:    MAX   1600 MIN   1520 WITH      0 ERRORS
FILE  12 HAD:    19 BLOCKS:    MAX   1600 MIN   1120 WITH      0 ERRORS
FILE  13 HAD:    10 BLOCKS:    MAX   1600 MIN   1360 WITH      0 ERRORS
FILE  14 HAD:     2 BLOCKS:    MAX   1600 MIN   1440 WITH      0 ERRORS
FILE  15 HAD:     3 BLOCKS:    MAX   1600 MIN     80 WITH      0 ERRORS
FILE  16 HAD:     3 BLOCKS:    MAX   1600 MIN   1280 WITH      0 ERRORS
FILE  17 HAD:     2 BLOCKS:    MAX   1600 MIN    480 WITH      0 ERRORS
FILE  18 HAD:     1 BLOCKS:    MAX   1520 MIN   1520 WITH      0 ERRORS   8/08/80
FILE  19 HAD:     3 BLOCKS:    MAX   1600 MIN    880 WITH      0 ERRORS
FILE  20 HAD:     2 BLOCKS:    MAX   1600 MIN    800 WITH      0 ERRORS
FILE  21 HAD:     2 BLOCKS:    MAX   1600 MIN    720 WITH      0 ERRORS
FILE  22 HAD:     3 BLOCKS:    MAX   1600 MIN    160 WITH      0 ERRORS
FILE  23 HAD:     3 BLOCKS:    MAX   1600 MIN    240 WITH      0 ERRORS
FILE  24 HAD:     2 BLOCKS:    MAX   1600 MIN    480 WITH      0 ERRORS
FILE  25 HAD:     2 BLOCKS:    MAX   1600 MIN    960 WITH      0 ERRORS
FILE  26 HAD:     2 BLOCKS:    MAX   1600 MIN    800 WITH      0 ERRORS
FILE  27 HAD:    24 BLOCKS:    MAX   1600 MIN    560 WITH      0 ERRORS
FILE  28 HAD:     3 BLOCKS:    MAX   1600 MIN   1520 WITH      0 ERRORS
FILE  29 HAD:     7 BLOCKS:    MAX   1600 MIN   1360 WITH      0 ERRORS
FILE  30 HAD:     4 BLOCKS:    MAX   1600 MIN   1280 WITH      0 ERRORS
FILE  31 HAD:    12 BLOCKS:    MAX   1600 MIN    400 WITH      0 ERRORS
FILE  32 HAD:   111 BLOCKS:    MAX   1600 MIN    240 WITH      0 ERRORS
FILE  33 HAD:    13 BLOCKS:    MAX   1600 MIN    800 WITH      0 ERRORS
FILE  34 HAD:    12 BLOCKS:    MAX   1600 MIN    480 WITH      0 ERRORS
-----------------------------------------------------------------------
FILE  35 HAD:     1 BLOCKS:    MAX   1360 MIN   1360 WITH      0 ERRORS
FILE  36 HAD:  1200 BLOCKS:    MAX   1600 MIN   1600 WITH      0 ERRORS
FILE  37 HAD:    93 BLOCKS:    MAX   1600 MIN    880 WITH      0 ERRORS
FILE  38 HAD:   135 BLOCKS:    MAX   1600 MIN    480 WITH      0 ERRORS
FILE  39 HAD:     9 BLOCKS:    MAX   1600 MIN     80 WITH      0 ERRORS
FILE  40 HAD:     7 BLOCKS:    MAX   1600 MIN    800 WITH      0 ERRORS
FILE  41 HAD:   349 BLOCKS:    MAX   1600 MIN    160 WITH      0 ERRORS
FILE  42 HAD:     2 BLOCKS:    MAX   1600 MIN   1440 WITH      0 ERRORS
FILE  43 HAD:     2 BLOCKS:    MAX   1600 MIN    800 WITH      0 ERRORS
FILE  44 HAD:     5 BLOCKS:    MAX   1600 MIN    160 WITH      0 ERRORS   8/09/80
FILE  45 HAD:     3 BLOCKS:    MAX   1600 MIN     80 WITH      0 ERRORS
FILE  46 HAD:     9 BLOCKS:    MAX   1600 MIN   1520 WITH      0 ERRORS
FILE  47 HAD:     3 BLOCKS:    MAX   1600 MIN   1280 WITH      0 ERRORS
FILE  48 HAD:     5 BLOCKS:    MAX   1600 MIN    880 WITH      0 ERRORS
FILE  49 HAD:    55 BLOCKS:    MAX   1600 MIN    560 WITH      0 ERRORS
FILE  50 HAD:    13 BLOCKS:    MAX   1600 MIN     80 WITH      0 ERRORS
FILE  51 HAD:    11 BLOCKS:    MAX   1600 MIN   1040 WITH      0 ERRORS
-----------------------------------------------------------------------
FILE  52 HAD:     2 BLOCKS:    MAX   1600 MIN    480 WITH      0 ERRORS
FILE  53 HAD:   164 BLOCKS:    MAX   1600 MIN    560 WITH      0 ERRORS
FILE  54 HAD:   147 BLOCKS:    MAX   1600 MIN   1520 WITH      0 ERRORS
FILE  55 HAD:    10 BLOCKS:    MAX   1600 MIN   1120 WITH      0 ERRORS
FILE  56 HAD:     6 BLOCKS:    MAX   1600 MIN   1120 WITH      0 ERRORS   8/10/80
FILE  57 HAD:     6 BLOCKS:    MAX   1600 MIN   1440 WITH      0 ERRORS
FILE  58 HAD:   226 BLOCKS:    MAX   1600 MIN    960 WITH      0 ERRORS
FILE  59 HAD:     2 BLOCKS:    MAX   1600 MIN   1440 WITH      0 ERRORS
FILE  60 HAD:     2 BLOCKS:    MAX   1600 MIN    640 WITH      0 ERRORS
FILE  61 HAD:     5 BLOCKS:    MAX   1600 MIN    480 WITH      0 ERRORS
```

continued

```
FILE    62 HAD:       3 BLOCKS:    MAX   1600 MIN    960 WITH      0 ERRORS
FILE    63 HAD:       3 BLOCKS:    MAX   1600 MIN    320 WITH      0 ERRORS
FILE    64 HAD:       2 BLOCKS:    MAX   1600 MIN   1200 WITH      0 ERRORS
FILE    65 HAD:       3 BLOCKS:    MAX   1600 MIN    560 WITH      0 ERRORS
FILE    66 HAD:       2 BLOCKS:    MAX   1600 MIN   1520 WITH      0 ERRORS
FILE    67 HAD:       2 BLOCKS:    MAX   1600 MIN    800 WITH      0 ERRORS
FILE    68 HAD:       2 BLOCKS:    MAX   1600 MIN   1520 WITH      0 ERRORS
FILE    69 HAD:       3 BLOCKS:    MAX   1600 MIN    320 WITH      0 ERRORS
FILE    70 HAD:       3 BLOCKS:    MAX   1600 MIN   1440 WITH      0 ERRORS
FILE    71 HAD:       6 BLOCKS:    MAX   1600 MIN   1200 WITH      0 ERRORS
FILE    72 HAD:       4 BLOCKS:    MAX   1600 MIN    720 WITH      0 ERRORS
FILE    73 HAD:      10 BLOCKS:    MAX   1600 MIN    880 WITH      0 ERRORS
FILE    74 HAD:       5 BLOCKS:    MAX   1600 MIN    400 WITH      0 ERRORS
FILE    75 HAD:     114 BLOCKS:    MAX   1600 MIN    400 WITH      0 ERRORS
FILE    76 HAD:      13 BLOCKS:    MAX   1600 MIN    160 WITH      0 ERRORS
FILE    77 HAD:      12 BLOCKS:    MAX   1600 MIN    400 WITH      0 ERRORS
FILE    78 HAD:       2 BLOCKS:    MAX   1600 MIN    240 WITH      0 ERRORS
FILE    79 HAD:    1545 BLOCKS:    MAX   1600 MIN   1440 WITH      0 ERRORS
FILE    80 HAD:     164 BLOCKS:    MAX   1600 MIN    800 WITH      0 ERRORS
FILE    81 HAD:     109 BLOCKS:    MAX   1600 MIN   1040 WITH      0 ERRORS
FILE    82 HAD:      24 BLOCKS:    MAX   1600 MIN   1280 WITH      0 ERRORS
FILE    83 HAD:       3 BLOCKS:    MAX   1600 MIN    640 WITH      0 ERRORS
FILE    84 HAD:       3 BLOCKS:    MAX   1600 MIN    960 WITH      0 ERRORS
FILE    85 HAD:     156 BLOCKS:    MAX   1600 MIN    320 WITH      0 ERRORS
FILE    86 HAD:       2 BLOCKS:    MAX   1600 MIN   1440 WITH      0 ERRORS
FILE    87 HAD:       2 BLOCKS:    MAX   1600 MIN    640 WITH      0 ERRORS
FILE    88 HAD:       2 BLOCKS:    MAX   1600 MIN    880 WITH      0 ERRORS
FILE    89 HAD:       2 BLOCKS:    MAX   1600 MIN    960 WITH      0 ERRORS
FILE    90 HAD:       2 BLOCKS:    MAX   1600 MIN    960 WITH      0 ERRORS
FILE    91 HAD:       3 BLOCKS:    MAX   1600 MIN    480 WITH      0 ERRORS
FILE    92 HAD:       1 BLOCKS:    MAX   1280 MIN   1280 WITH      0 ERRORS
FILE    93 HAD:       3 BLOCKS:    MAX   1600 MIN    480 WITH      0 ERRORS
FILE    94 HAD:       4 BLOCKS:    MAX   1600 MIN   1360 WITH      0 ERRORS
FILE    95 HAD:       3 BLOCKS:    MAX   1600 MIN   1600 WITH      0 ERRORS
FILE    96 HAD:      10 BLOCKS:    MAX   1600 MIN   1120 WITH      0 ERRORS
FILE    97 HAD:       4 BLOCKS:    MAX   1600 MIN    480 WITH      0 ERRORS
FILE    98 HAD:      35 BLOCKS:    MAX   1600 MIN    320 WITH      0 ERRORS
FILE    99 HAD:      12 BLOCKS:    MAX   1600 MIN    720 WITH      0 ERRORS
FILE   100 HAD:      10 BLOCKS:    MAX   1600 MIN   1600 WITH      0 ERRORS
FILE   101 HAD:       2 BLOCKS:    MAX   1600 MIN    560 WITH      0 ERRORS
FILE   102 HAD:     566 BLOCKS:    MAX   1600 MIN   1600 WITH      0 ERRORS
FILE   103 HAD:     193 BLOCKS:    MAX   1600 MIN    400 WITH      0 ERRORS
FILE   104 HAD:      94 BLOCKS:    MAX   1600 MIN    640 WITH      0 ERRORS
FILE   105 HAD:      39 BLOCKS:    MAX   1600 MIN    720 WITH      0 ERRORS
FILE   106 HAD:      72 BLOCKS:    MAX   1600 MIN    480 WITH      0 ERRORS
FILE   107 HAD:      11 BLOCKS:    MAX   1600 MIN   1200 WITH      0 ERRORS
FILE   108 HAD:       4 BLOCKS:    MAX   1600 MIN    240 WITH      0 ERRORS
FILE   109 HAD:       4 BLOCKS:    MAX   1600 MIN    480 WITH      0 ERRORS
FILE   110 HAD:       4 BLOCKS:    MAX   1600 MIN    800 WITH      0 ERRORS
FILE   111 HAD:      72 BLOCKS:    MAX   1600 MIN    320 WITH      0 ERRORS
FILE   112 HAD:       2 BLOCKS:    MAX   1600 MIN   1440 WITH      0 ERRORS
FILE   113 HAD:       2 BLOCKS:    MAX   1600 MIN    720 WITH      0 ERRORS
FILE   114 HAD:       2 BLOCKS:    MAX   1600 MIN   1120 WITH      0 ERRORS
FILE   115 HAD:       2 BLOCKS:    MAX   1600 MIN    480 WITH      0 ERRORS
FILE   116 HAD:       2 BLOCKS:    MAX   1600 MIN   1360 WITH      0 ERRORS
FILE   117 HAD:       3 BLOCKS:    MAX   1600 MIN    320 WITH      0 ERRORS
FILE   118 HAD:       3 BLOCKS:    MAX   1600 MIN     80 WITH      0 ERRORS
FILE   119 HAD:       2 BLOCKS:    MAX   1600 MIN   1280 WITH      0 ERRORS
FILE   120 HAD:       2 BLOCKS:    MAX   1600 MIN   1280 WITH      0 ERRORS
FILE   121 HAD:       1 BLOCKS:    MAX   1440 MIN   1440 WITH      0 ERRORS
FILE   122 HAD:       5 BLOCKS:    MAX   1600 MIN   1120 WITH      0 ERRORS
```

8/10/80 (cont.)

8/11/80

8/12/80

continued

```
FILE  123 HAD:     7 BLOCKS:   MAX  1600 MIN  1120 WITH    0 ERRORS
FILE  124 HAD:     5 BLOCKS:   MAX  1600 MIN  1440 WITH    0 ERRORS
FILE  125 HAD:     8 BLOCKS:   MAX  1600 MIN  1440 WITH    0 ERRORS   8/12/80
FILE  126 HAD:    11 BLOCKS:   MAX  1600 MIN   240 WITH    0 ERRORS
FILE  127 HAD:     9 BLOCKS:   MAX  1600 MIN   960 WITH    0 ERRORS    (cont.)
FILE  128 HAD:     2 BLOCKS:   MAX  1600 MIN  1360 WITH    0 ERRORS
FILE  129 HAD:   752 BLOCKS:   MAX  1600 MIN   960 WITH    0 ERRORS
FILE  130 HAD:   111 BLOCKS:   MAX  1600 MIN   800 WITH    0 ERRORS
FILE  131 HAD:   222 BLOCKS:   MAX  1600 MIN  1200 WITH    0 ERRORS
FILE  132 HAD:   162 BLOCKS:   MAX  1600 MIN  1600 WITH    0 ERRORS
FILE  133 HAD:   134 BLOCKS:   MAX  1600 MIN   240 WITH    0 ERRORS
FILE  134 HAD:    84 BLOCKS:   MAX  1600 MIN  1040 WITH    0 ERRORS
FILE  135 HAD:     7 BLOCKS:   MAX  1600 MIN  1120 WITH    0 ERRORS
FILE  136 HAD:     6 BLOCKS:   MAX  1600 MIN  1280 WITH    0 ERRORS
FILE  137 HAD:     6 BLOCKS:   MAX  1600 MIN  1520 WITH    0 ERRORS
FILE  138 HAD:     4 BLOCKS:   MAX  1600 MIN    80 WITH    0 ERRORS
FILE  139 HAD:     4 BLOCKS:   MAX  1600 MIN   880 WITH    0 ERRORS
FILE  140 HAD:     5 BLOCKS:   MAX  1600 MIN  1520 WITH    0 ERRORS
FILE  141 HAD:     6 BLOCKS:   MAX  1600 MIN   240 WITH    0 ERRORS
FILE  142 HAD:   194 BLOCKS:   MAX  1600 MIN  1120 WITH    0 ERRORS
FILE  143 HAD:     4 BLOCKS:   MAX  1600 MIN   560 WITH    0 ERRORS
FILE  144 HAD:    22 BLOCKS:   MAX  1600 MIN   800 WITH    0 ERRORS
FILE  145 HAD:    12 BLOCKS:   MAX  1600 MIN   400 WITH    0 ERRORS
FILE  146 HAD:     2 BLOCKS:   MAX  1600 MIN  1440 WITH    0 ERRORS   8/13/80
FILE  147 HAD:     2 BLOCKS:   MAX  1600 MIN  1520 WITH    0 ERRORS
FILE  148 HAD:     2 BLOCKS:   MAX  1600 MIN  1280 WITH    0 ERRORS
FILE  149 HAD:     5 BLOCKS:   MAX  1600 MIN    80 WITH    0 ERRORS
FILE  150 HAD:     3 BLOCKS:   MAX  1600 MIN  1440 WITH    0 ERRORS
FILE  151 HAD:     3 BLOCKS:   MAX  1600 MIN  1120 WITH    0 ERRORS
FILE  152 HAD:     2 BLOCKS:   MAX  1600 MIN  1360 WITH    0 ERRORS
FILE  153 HAD:     2 BLOCKS:   MAX  1600 MIN   960 WITH    0 ERRORS
FILE  154 HAD:     2 BLOCKS:   MAX  1600 MIN   640 WITH    0 ERRORS
FILE  155 HAD:     2 BLOCKS:   MAX  1600 MIN   320 WITH    0 ERRORS
FILE  156 HAD:     2 BLOCKS:   MAX  1600 MIN   480 WITH    0 ERRORS
FILE  157 HAD:     1 BLOCKS:   MAX  1520 MIN  1520 WITH    0 ERRORS
FILE  158 HAD:     4 BLOCKS:   MAX  1600 MIN   320 WITH    0 ERRORS
FILE  159 HAD:    11 BLOCKS:   MAX  1600 MIN   880 WITH    0 ERRORS
FILE  160 HAD:     9 BLOCKS:   MAX  1600 MIN  1600 WITH    0 ERRORS
FILE  161 HAD:     4 BLOCKS:   MAX  1600 MIN   320 WITH    0 ERRORS
FILE  162 HAD:     6 BLOCKS:   MAX  1600 MIN   400 WITH    0 ERRORS
FILE  163 HAD:    13 BLOCKS:   MAX  1600 MIN   720 WITH    0 ERRORS
FILE  164 HAD:    10 BLOCKS:   MAX  1600 MIN  1360 WITH    0 ERRORS
FILE  165 HAD:     1 BLOCKS:   MAX   560 MIN   560 WITH    0 ERRORS
FILE  166 HAD:     2 BLOCKS:   MAX  1600 MIN  1440 WITH    0 ERRORS
FILE  167 HAD:     3 BLOCKS:   MAX  1600 MIN   320 WITH    0 ERRORS
FILE  168 HAD:     2 BLOCKS:   MAX  1600 MIN  1200 WITH    0 ERRORS   8/14/80
FILE  169 HAD:     4 BLOCKS:   MAX  1600 MIN  1520 WITH    0 ERRORS
FILE  170 HAD:    13 BLOCKS:   MAX  1600 MIN   240 WITH    0 ERRORS
FILE  171 HAD:    11 BLOCKS:   MAX  1600 MIN  1600 WITH    0 ERRORS
FILE  172 HAD:     1 BLOCKS:   MAX   560 MIN   560 WITH    0 ERRORS
FILE  173 HAD:   123 BLOCKS:   MAX  1600 MIN    80 WITH    0 ERRORS
FILE  174 HAD:   170 BLOCKS:   MAX  1600 MIN   240 WITH    0 ERRORS
FILE  175 HAD:     2 BLOCKS:   MAX  1600 MIN  1440 WITH    0 ERRORS   8/15/80
FILE  176 HAD:     2 BLOCKS:   MAX  1600 MIN   880 WITH    0 ERRORS
FILE  177 HAD:    10 BLOCKS:   MAX  1600 MIN  1600 WITH    0 ERRORS
FILE  178 HAD:     8 BLOCKS:   MAX  1600 MIN  1600 WITH    0 ERRORS
FILE  179 HAD:    15 BLOCKS:   MAX  1600 MIN  1120 WITH    0 ERRORS
FILE  180 HAD:     8 BLOCKS:   MAX  1600 MIN  1040 WITH    0 ERRORS   Monthly
FILE  181 HAD:   103 BLOCKS:   MAX  1600 MIN  1360 WITH    0 ERRORS   Data
FILE  182 HAD:   103 BLOCKS:   MAX  1600 MIN  1360 WITH    0 ERRORS   Base
FILE  183 HAD:    70 BLOCKS:   MAX  1600 MIN   880 WITH    0 ERRORS
```

continued

```
FILE  184 HAD:     70 BLOCKS:    MAX   1600 MIN     880 WITH      0 ERRORS
FILE  185 HAD:     45 BLOCKS:    MAX   1600 MIN     960 WITH      0 ERRORS
FILE  186 HAD:     27 BLOCKS:    MAX   1600 MIN     960 WITH      0 ERRORS
FILE  187 HAD:     32 BLOCKS:    MAX   1600 MIN     640 WITH      0 ERRORS   Monthly
FILE  188 HAD:     53 BLOCKS:    MAX   1600 MIN    1600 WITH      0 ERRORS   Data
FILE  189 HAD:     52 BLOCKS:    MAX   1600 MIN     320 WITH      0 ERRORS   Base (cont.)
FILE  190 HAD:     36 BLOCKS:    MAX   1600 MIN     960 WITH      0 ERRORS
FILE  191 HAD:     34 BLOCKS:    MAX   1600 MIN     320 WITH      0 ERRORS
FILE  192 HAD:     26 BLOCKS:    MAX   1600 MIN     960 WITH      0 ERRORS
FILE  193 HAD:     26 BLOCKS:    MAX   1600 MIN     960 WITH      0 ERRORS
FILE  194 HAD:     26 BLOCKS:    MAX   1600 MIN     960 WITH      0 ERRORS
FILE  195 HAD:     26 BLOCKS:    MAX   1600 MIN     960 WITH      0 ERRORS
```

END OF TABLE 9.

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APPENDIX A.

PARTIAL LISTING OF SELECTED DATA FILES OF 8/13/80 (*)

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37 RECORDS AT END OF FILE

 ✓SUMARY.813               LIST OF FILES FOR 8/13/80
 ✓EMIA.813    EMI          CHEM I AIRCRAFT DATA                STATE-20
 ✓AVA.813     AV           CHEM II AIRCRAFT DATA               STATE-20
 ✓SRIA01.813  SRI          SCOUT AIRCRAFT DATA                 STATE-20
  SRIA02.813  SRI          SCOUT AIRCRAFT DATA                 STATE-20
  SRIA03.813  SRI          SCOUT AIRCRAFT DATA                 STATE-20
 ✓CHOP.813    EPA/EMI      CHOPPER HELICOPTER DATA             STATE-20
 ✓UVDA01.813  NASA-LARC    ELECTRA UV-DIAL DATA                STATE-20
  UVDA02.813  NASA-LARC    ELECTRA UV-DIAL DATA                STATE-20
  UVDA03.813  NASA-LARC    ELECTRA UV-DIAL DATA                STATE-20
 ✓HRLA01.813  NASA/U.WIS   ELECTRA HSRL DATA                   STATE-20
  HRLA02.813  NASA/U.WIS   ELECTRA HSRL DATA                   STATE-20
 ✓ERLU.813    NOAA-ERL     TURBULENCE AIRCRAFT (UNFILTERED)    STATE-20
 ✓ERLF.813    NOAA-ERL     TURBULENCE AIRCRAFT (FILTERED)      STATE-20
 ✓EMIG.813    EMI          AQML DATA                           STATE-20
 ✓UMCG.813    U.MINN       UMHL CONTINUOUS (SUMMARY)           STATE-20
 ✓UMPG.813    U.MINN       UMHL PARTICULATE (SUMMARY)          STATE-20
 ✓UMSD.813    U.MINN       UMHL SIZE DISTRN (SUMMARY)          STATE-20
 ✓MUDD.813    H.MUDD       SPECIAL PHOTOCHEM. LAB              STATE-20
 ✓SP4G01.813  NASA-GSFC    4-CH. SUN-PHOTOMETER                STATE-20
 ✓ARL01.813   NOAA-ARL     SMALL TETROON DATA                  STATE-20
  ARL02.813   NOAA-ARL     SMALL TETROON DATA                  STATE-20
  ARL03.813   NOAA-ARL     SMALL TETROON DATA                  STATE-20
  ARL04.813   NOAA-ARL     SMALL TETROON DATA                  STATE-20
  ARL05.813   NOAA-ARL     SMALL TETROON DATA                  STATE-20
  ARL06.813   NOAA-ARL     SMALL TETROON DATA                  STATE-20
  ARL07.813   NOAA-ARL     SMALL TETROON DATA                  STATE-20
  ARL08.813   NOAA-ARL     SMALL TETROON DATA                  STATE-20
  ARL09.813   NOAA-ARL     SMALL TETROON DATA                  STATE-20
  ARL10.813   NOAA-ARL     SMALL TETROON DATA                  STATE-20
 ✓EPAO.813    EPA/FAA/SRI  LARGE TETROON DATA                  STATE-20
 ✓CORAVS.813  NASA-LARC    CHEM III BSCAT,03 CF. UVDIAL        STATE-VS
 ✓CRTAVS.813  NASA-LARC    CHEM III TEMP CF. UVDIAL            STATE-VS
 ✓AVPI01.813  AV           SODAR 1 PIBAL DATA                  STATE-VS
 ✓AVAS01.813  AV           SODAR 1 AIRSONDE DATA               STATE-VS
 ✓UAWIND.813  NWS          UPPER AIR WIND DATA                 NWS-WIND
 ✓UATEMP.813  NWS          UPPER AIR TEMP DATA                 NWS-TEMP

TOTAL OF   37 RECORDS IN FILE SUMARY.813
```

```
 50 RECORDS AT BEGINNING OF FILE

20   2  21  EMIA.813    08/13/80     2. SECONDS
PEPE/NEROS 1980               EMI       AIRCRAFT(CHEM 1) DATA
(6F8.0,F6.0,4F6.1,2X,/,9F8.1,F8.4)
TIME EDT  LONG      LAT       UTM X     UTM Y     UTM ZONE  ALT       TEMP
TDP       PRESSURE  BSCAT     FLOW      SO2       SP        SA        NO
NOX       O3        ANC       SP HEATR  SP 0 FLG
HHMMSS    DDMMSS W  DDMMSS N  METERS    METERS              m MSL     DEG C
DEG C     MILLIBAR  10E-4/m   CFM       PPB       PPB       PPB       PPB
PPB       PPB       KCN/CC    VOLTS^-6  VOLTS
      7508
 240000. 885000. 445000. 810000.4900000.     19. 3400.  50.0  25.01050.0  10.0
     6.0   275.0    40.0    20.0    40.0    50.0   400.0    35.0 50000.0  5.0000
      0. 710000. 320000. 260000.4000000.     16.    0.   5.0 -25.0 650.0   0.0
    -1.0   -15.0   -10.0   -10.0   -15.0     0.0   -10.0   -10.0  -900.0 -1.0000
 124909. 830504. 400431. 322000.4438000.     17.  583.  49.3 -17.8 955.9   0.1
     0.0     3.8     0.0     0.0    12.4    20.2     0.0     0.0    -1.0 -0.0001
 125353. 830504. 400431. 322000.4438000.     17. 1010.  23.6  15.3 911.3   1.1
     0.0     3.6     0.0     0.0    12.2    21.4    53.7     0.0  1437.0  0.0816
 125354. 830504. 400433. 321997.4438050.     17. 1010.  23.5  15.8 911.3   1.1
     0.0     3.6     0.0     0.0    12.2    21.4    53.7     0.0     0.0  0.6614
 125357. 830505. 400438. 321989.4438190.     17. 1010.  23.5  15.8 911.3   1.1
     0.0     3.6     0.0     0.0    12.1    21.2    53.8     0.0  4092.0  0.0818
 125359. 830505. 400441. 321984.4438290.     17. 1010.  23.4  15.8 911.3   1.1
     0.0     4.2     0.0     0.0    12.0    21.2    53.8     0.0  4227.0 -0.0004
 125401. 830505. 400444. 321978.4438380.     17. 1010.  23.4  15.8 911.3   1.1
     0.0     3.2     0.0     0.0    11.9    21.2    53.9     0.0  3689.0 -0.0004
 125403. 830506. 400447. 321973.4438480.     17. 1010.  23.5  15.8 911.3   1.1
     0.0     2.4     0.0     0.0    11.5    21.3    54.1     0.0  3361.0 -0.0005
 125405. 830506. 400450. 321967.4438580.     17. 1010.  23.7  15.8 911.3   1.1
     0.0     3.5     0.0     0.0    11.3    21.3    54.3     0.0  3793.0 -0.0005
 125407. 830506. 400453. 321962.4438670.     17. 1010.  24.0  15.7 911.3   1.1
     0.0     2.6     0.0     0.0    11.5    21.3    54.9     0.0  3469.0 -0.0005
 125409. 830507. 400456. 321956.4438770.     17. 1010.  23.8  15.7 911.3   1.1
     0.0     4.7     0.0     0.0    11.6    21.2    56.1     0.0  3369.0 -0.0004
 125411. 830507. 400460. 321951.4438870.     17. 1010.  23.7  15.7 911.3   1.1
     0.0     4.7     0.0     0.0    11.6    21.2    57.1     0.0  3983.0 -0.0005
 125413. 830507. 400502. 321945.4438960.     17. 1010.  23.4  15.7 911.3   1.1
     0.0     1.7     0.0     0.0    11.5    21.2    57.2     0.0  3442.0 -0.0004
 125415. 830507. 400506. 321940.4439060.     17. 1010.  23.3  15.7 911.3   1.1
     0.0     3.7     0.0     0.0    11.6    21.1    57.3     0.0  3576.0 -0.0005
 125417. 830508. 400509. 321934.4439150.     17. 1010.  23.2  15.7 911.3   1.1
     0.0     3.6     0.0     0.0    11.7    21.1    57.7     0.0  3267.0 -0.0005
 125419. 830508. 400512. 321929.4439250.     17. 1010.  23.2  16.3 911.3   1.1
     0.0     3.9     0.0     0.0    11.8    21.2    57.9     0.0  2615.0 -0.0005
 125421. 830509. 400515. 321923.4439350.     17. 1010.  23.3  16.3 911.3   1.1
     0.0     3.7     0.0     0.0    11.7    21.1    58.3     0.0  2063.0 -0.0005
 125423. 830509. 400518. 321918.4439440.     17. 1010.  23.4  16.0 911.3   1.1
     0.0     2.8     0.0     0.0    11.6    21.1    58.9     0.0  1542.0 -0.0005
 125425. 830509. 400521. 321912.4439540.     17. 1010.  22.8  16.1 911.3   1.1
     0.0     3.3     0.0     0.0    11.7    21.1    59.6     0.0  1104.0 -0.0005


 50 RECORDS AT END OF FILE
```

```
172259. 830339. 400546. 324067.4440240.     17. 309.  30.7  16.6 985.4   1.8
    0.0    -1.5     0.0     0.0    13.3    20.5   70.4     0.0  -182.0 -0.0005
172301. 830343. 400542. 323978.4440150.     17. 309.  31.0  16.6 985.4   1.8
    0.0    -3.6     0.0     0.0    13.2    20.5   71.1     0.0  -174.0 -0.0005
172303. 830346. 400539. 323888.4440050.     17. 309.  30.7  16.6 985.4   1.9
    0.0    -1.2     0.0     0.0    13.2    20.5   71.7     0.0  -178.0 -0.0005
172305. 830350. 400536. 323798.4439950.     17. 309.  30.7  16.6 985.4   1.9
    0.0    -1.3     0.0     0.0    13.1    20.5   71.2     0.0  -178.0 -0.0005
172307. 830354. 400533. 323708.4439850.     17. 309.  31.1  16.6 985.4   1.8
    0.0    -1.2     0.0     0.0    13.1    20.5   70.0     0.0  -178.0 -0.0005
172309. 830358. 400530. 323618.4439760.     17. 309.  30.0  16.6 985.4   1.8
    0.0    -1.7     0.0     0.0    13.2    20.4   69.4     0.0  -183.0 -0.0005
172311. 830401. 400526. 323528.4439660.     17. 309.  30.3  16.6 985.4   1.8
    0.0    -1.2     0.0     0.0    13.1    20.5   70.2     0.0  -184.0 -0.0005
172313. 830405. 400523. 323438.4439560.     17. 309.  31.1  16.6 985.4   1.8
    0.0    -0.4     0.0     0.0    13.1    20.5   71.0     0.0  -192.0 -0.0005
172315. 830409. 400520. 323348.4439460.     17. 309.  30.6  16.6 985.4   1.8
    0.0     0.2     0.0     0.0    13.1    20.4   71.1     0.0  -197.0 -0.0005
172317. 830412. 400517. 323258.4439370.     17. 309.  31.2  16.6 985.4   1.8
    0.0     0.8     0.0     0.0    13.0    20.4   71.6     0.0  -199.0 -0.0005
172319. 830416. 400513. 323169.4439270.     17. 309.  30.8  16.6 985.4   1.8
    0.0    -2.8     0.0     0.0    13.0    20.4   72.5     0.0  -205.0 -0.0005
172321. 830420. 400510. 323079.4439170.     17. 309.  31.3  16.6 985.4   1.8
    0.0    -0.4     0.0     0.0    13.0    20.4   73.4     0.0  -205.0 -0.0005
172323. 830424. 400507. 322989.4439070.     17. 309.  31.1  16.6 985.4   1.8
    0.0    -0.7     0.0     0.0    13.0    20.4   73.7     0.0  -212.0 -0.0005
172325. 830427. 400504. 322899.4438980.     17. 309.  30.6  16.6 985.4   1.8
    0.0     1.4     0.0     0.0    12.9    20.4   73.0     0.0  -213.0 -0.0005
172327. 830431. 400501. 322809.4438880.     17. 309.  30.7  16.6 985.4   1.8
    0.0     0.4     0.0     0.0    12.9    20.3   72.1     0.0  -216.0 -0.0005
172329. 830434. 400457. 322719.4438780.     17. 309.  31.0  16.6 985.4   1.8
    0.0    -1.2     0.0     0.0    12.9    20.4   71.6     0.0  -221.0 -0.0005
172331. 830438. 400454. 322629.4438680.     17. 309.  31.0  16.6 985.4   1.8
    0.0     3.0     0.0     0.0    12.9    20.4   71.7     0.0  -223.0 -0.0005
172333. 830442. 400451. 322539.4438590.     17. 309.  31.1  16.6 985.4   1.8
    0.0     0.6     0.0     0.0    12.9    20.4   72.1     0.0  -227.0 -0.0005
172335. 830445. 400448. 322449.4438490.     17. 309.  31.7  16.6 985.4   1.8
    0.0    -1.9     0.0     0.0    12.9    20.4   72.7     0.0  -227.0 -0.0005
172337. 830449. 400444. 322360.4438390.     17. 309.  31.4  16.6 985.4   1.8
    0.0    -8.0     0.0     0.0    12.9    20.3   73.1     0.0  -225.0 -0.0005
172339. 830453. 400441. 322270.4438290.     17. 309.  31.1  16.6 985.4   1.8
    0.0    -1.2     0.0     0.0    12.9    20.3   72.9     0.0  -231.0 -0.0005
172341. 830457. 400438. 322180.4438200.     17. 309.  31.4  16.6 985.4   1.8
    0.0     3.4     0.0     0.0    12.9    20.3   72.8     0.0  -229.0 -0.0005
172343. 830500. 400435. 322090.4438100.     17. 309.  31.8  16.6 985.4   1.8
    0.0     3.4     0.0     0.0    12.8    20.3   72.6     0.0  -231.0 -0.0005
172345. 830504. 400431. 322000.4438000.     17. 309.  31.3  16.6 985.4   1.8
    0.0     0.2     0.0     0.0    12.8    20.3   72.2     0.0  -228.0 -0.0005
PARAMETER VALUE = -9999.0 INDICATES DATA NOT VALID
QA DONE BY EMI, AND CHECKED BY AV.


TOTAL OF 15032 RECORDS IN FILE EMIA.813
```

```
 50 RECORDS AT BEGINNING OF FILE

20   3  21  AV A.813    08/13/80    12. SECONDS
PEPE/NEROS 1980               AV        AIRCRAFT(CHEM 2) DATA
(7(F9.1,2X),3X)
TIME EDT  EVNT      VORFRQ    IAS       HEAD      VOR       DME       LAT
LONG      ALT       TURB      TEMP      TDP       O3        NO        NOX
SO2       SO4       BSCAT     ANC       AC
HHMMSS              MHz       KM/HR     DEG       DEG       KM        DDDMMSS
DDDMMSS   m MSL     UITS      DEG C     DEG C     PPB       PPB       PPB
PPB       PPB       10E-4/M   10E3/ML   mV
       730
 210749.0       99.0      118.0      302.0      360.0      360.0      100.0
     90.0      180.0     5000.0       10.0       50.0       50.0      500.0
    500.0      500.0      500.0       30.0       10.0      100.0    10000.0
 183900.0        0.0      108.0        0.0        0.0        0.0        0.0
      0.0        0.0        0.0        0.0      -50.0      -40.0        0.0
      0.0        0.0        0.0        0.0        0.0        0.0        0.0
 183926.0        0.0      116.7       60.0       84.0      325.0       18.5
 400112.0   822709.0      268.0        2.6       26.2       17.4       78.0
      2.0       15.0       26.0  -999001.0        1.7       15.0      589.0
 183938.0        0.0      116.7       74.0       83.0      325.0       18.5
 400112.0   822709.0      268.0        2.7       25.8       17.7       75.0
     -5.0       15.0       27.0  -999001.0        1.9       16.0      598.0
 183950.0        0.0      116.7       64.0       86.0      325.0       18.5
 400112.0   822709.0      268.0        3.2       25.5       18.0       77.0
     -6.0       17.0       25.0        0.0        1.8       15.0      559.0
 184002.0        0.0      116.7       36.0       87.0      325.0       18.5
 400112.0   822709.0      268.0        3.3       22.8       19.5       72.0
     -3.0       11.0       24.0        5.0        1.6       17.0      668.0
 184014.0        0.0      116.7       16.0       41.0      325.0       18.5
 400112.0   822709.0      268.0        2.4       25.6       17.9       71.0
     -1.0       15.0       22.0        6.0        1.5       18.0      587.0
 184027.0        0.0      116.7       20.0      270.0      325.0       18.5
 400112.0   822709.0      268.0  -999001.0       26.1       17.8       64.0
      3.0       12.0       22.0        5.0        1.7       18.0      728.0
 184039.0        1.0      116.7      111.0      272.0      325.0       18.5
 400112.0   822709.0      268.0        5.4       25.5       17.9       78.0
      6.0       24.0       22.0        0.0        1.9       99.0     1385.0
 184051.0        1.0      116.7      180.0      272.0      325.0       18.5
 400112.0   822709.0      303.0        3.3       25.3       18.2       80.0
      1.0       14.0       23.0        0.0        1.9       22.0      843.0
 184103.0        1.0      116.7      204.0      268.0      325.0       18.5
 400112.0   822709.0      338.0        2.4       25.1       16.0       85.0
     -5.0       12.0       20.0        7.0        1.8       11.0      736.0
 184115.0        1.0      116.7      226.0      271.0      325.0       18.3
 400118.0   822715.0      366.0        1.2       25.0       15.8       86.0
     -2.0        5.0       21.0        7.0        1.7       12.0      662.0
 184128.0        1.0      116.7      227.0      274.0      325.0       17.9
 400127.0   822729.0      418.0        1.1       24.7       15.6       85.0
     -1.0        7.0       19.0        7.0        1.6        9.0      570.0
 184140.0        1.0      116.7      225.0      280.0      326.0       17.5


 50 RECORDS AT END OF FILE
```

```
       -4.0         7.0        12.0         7.0         2.3        10.0       792.0
   210458.0        16.0       116.7   -999001.0       265.0        82.0        34.5
   400511.0    825909.0       610.0         0.7        24.8        14.9       104.0
       -1.0         8.0        11.0         0.0         2.1        10.0       723.0
   210510.0        16.0       116.7       279.0       264.0        82.0        35.5
   400505.0    825951.0       641.0         0.6        24.0        14.8       104.0
       -1.0         7.0        11.0         4.0         2.1        14.0       743.0
   210522.0        16.0       116.7       260.0       270.0        82.0        36.4
   400459.0    830028.0       651.0         0.5        23.5        14.6       107.0
       -4.0         9.0        12.0         7.0         2.0        16.0       781.0
   210535.0        16.0       116.7       248.0       271.0        82.0        37.2
   400453.0    830103.0       641.0         0.5        23.2        14.6       107.0
        0.0         9.0        10.0         6.0         2.1        19.0       656.0
   210547.0        16.0       116.7       234.0       272.0        82.0        38.0
   400448.0    830136.0       620.0         0.6        23.9         8.9       110.0
       -1.0        13.0        10.0         7.0         2.2        21.0       736.0
   210559.0        16.0       116.7       234.0       273.0        82.0        38.8
   400443.0    830208.0       578.0         0.5        23.1        14.9       112.0
       -4.0         9.0        10.0         0.0         2.4        22.0       681.0
   210612.0        16.0       116.7       220.0       269.0        82.0        39.5
   400438.0    830238.0       554.0         0.5        23.1        15.1       116.0
       -3.0         8.0        12.0   -999001.0         2.5        24.0       777.0
   210624.0        16.0       116.7       198.0       240.0        82.0        40.2
   400433.0    830308.0       504.0         0.7        23.1        15.3       125.0
        0.0         9.0        13.0   -999001.0         2.7        25.0       833.0
   210636.0        16.0       116.7       183.0       262.0        82.0        40.8
   400429.0    830332.0       436.0         0.6        23.2        15.3       116.0
        0.0        10.0        16.0   -999001.0         2.5        24.0       813.0
   210648.0        16.0       116.7       184.0       273.0        82.0        41.4
   400425.0    830358.0       382.0         0.6        23.5        15.4       111.0
       -3.0        13.0        15.0   -999001.0         2.6        25.0       686.0
   210701.0        16.0       116.7       188.0       278.0        82.0        42.0
   400421.0    830422.0       337.0         1.9        23.8        15.7        91.0
       -3.0        15.0        14.0   -999001.0         2.7        28.0       673.0
   210713.0        17.0       116.7       172.0       249.0        82.0        42.7
   400417.0    830450.0       276.0         1.2        23.4        16.5        46.0
       -3.0        30.0        11.0   -999001.0         2.7        48.0       721.0
   210725.0        17.0       116.7       100.0       245.0        82.0        42.6
   400418.0    830445.0       276.0         4.8        23.0        16.4        49.0
       -3.0        33.0         9.0   -999001.0         2.7        52.0       718.0
   210737.0        17.0       116.7        61.0       232.0        82.0        42.6
   400418.0    830445.0       276.0         2.4        22.9        16.2        52.0
        0.0        29.0         8.0   -999001.0         2.6        38.0       764.0
   210749.0        17.0       116.7        26.0       228.0        82.0        42.6
   400418.0    830445.0       276.0         1.3        22.8        16.1        51.0
       -3.0        29.0         9.0   -999001.0         2.5        36.0       844.0
    13 AUGUST 1980 - FLIGHT 1: CHARACTERIZATION OF THE COLUMBUS URBAN PLUME
    UNDER NORTHEAST TRANSPORT CONDITIONS.
    ANC DATA QUESTIONABLE.  SO4= DATA INTERMITTENT.
    TURBULENCE UNIT = UITS = (CM**2/3)/SEC


 TOTAL OF 2210 RECORDS IN FILE AVA.813
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50 RECORDS AT BEGINNING OF FILE

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20   1  11  SRIA01.813  08/13/80      3. SECONDS
PEPE/NEROS 1980               SRI       AIRCRAFT(SCOUT) DATA
(3F8.0,8F7.1)
TIME LDT  LAT       LONG      ALT       IAS       TURB      TEMP      DPT
NEPH      SO2       OZONE
HHMMSS    DEG       DEG       m MSL     KM/HR     R UNITS   DEG C     DEG C
10E-4/M   PPB       PPB
    4416
 235959. 410000. 840000. 2000.0  462.5   10.0   35.0   50.0   12.0  100.0  250.0
      0. 390000. 813000.    0.0    0.0    0.0    0.0  -50.0    0.0    0.0    0.0
  92004.  400500.  830400.  183.5   10.6    0.2   21.6   16.2    2.0    3.6   12.1
  92007.  400500.  830400.  183.5   11.3    0.3   21.6   16.5    2.0    3.6   12.1
  92010.  400500.  830400.  183.5   11.8    0.3   21.7   16.8    2.0    3.6    9.4
  92013.  400500.  830400.  183.5   12.4    0.4   21.8   16.5    2.0    3.6    6.6
  92016.  400500.  830400.  183.5   13.5    0.5   21.9   16.1    2.0    3.6    7.8
  92019.  400500.  830400.  183.5   13.8    0.5   21.7   16.1    2.1    3.6    7.0
  92022.  400500.  830400.  183.5   13.7    0.7   21.8   16.1    2.2    3.6    6.5
  92025.  400500.  830400.  183.5   13.4    0.6   21.9   16.0    2.1    3.6    5.1
  92028.  400500.  830400.  183.5   11.6    0.5   21.7   16.1    2.1    3.6    5.5
  92031.  400500.  830400.  183.5   11.0    0.3   21.5   16.2    2.2    3.6    5.2
  92034.  400500.  830400.  183.5   10.5    0.2   21.3   16.1    2.1    3.6    6.9
  92037.  400500.  830400.  183.5   11.0    0.2   21.3   16.1    2.1    3.6    8.4
  92040.  400500.  830400.  183.5   11.8    0.3   21.5   16.1    2.1    3.6    8.1
  92043.  400500.  830400.  183.5   13.2    0.4   21.8   16.2    2.0    3.6    8.3
  92046.  400500.  830400.  183.5   13.9    0.4   21.6   16.7    2.0    3.6    9.1
  92049.  400500.  830400.  183.5   14.5    0.4   21.5   17.1    2.0    3.6   10.3
  92052.  400500.  830400.  183.5   15.5    0.4   21.3   16.8    2.0    3.6   10.1
  92055.  400500.  830400.  183.5   15.4    0.4   21.3   16.0    2.0    3.6   10.3
  92058.  400500.  830400.  183.5   15.6    0.5   21.2   16.0    2.0    3.6   11.5
  92101.  400500.  830400.  183.5   14.8    0.5   21.1   16.6    2.0    3.6   13.3
  92104.  400500.  830400.  183.5   14.0    0.5   21.2   17.0    2.0    3.6   12.9
  92107.  400500.  830400.  183.5   13.1    0.4   21.1   17.2    2.0    3.6   13.2
  92110.  400500.  830400.  183.5   12.4    0.3   21.2   16.6    2.0    3.6   10.7
  92113.  400500.  830400.  183.5   11.9    0.3   21.2   16.5    2.0    3.6    8.0
  92116.  400500.  830400.  183.5   11.6    0.2   21.2   16.8    2.0    3.6    8.4
  92119.  400500.  830400.  183.5   12.4    0.5   21.4   16.6    2.0    3.6    8.1
  92122.  400500.  830400.  183.5   11.2    1.3   21.6   16.3    2.0    3.6   13.9
  92125.  400500.  830400.  183.5   10.4    1.1   21.6   16.4    2.0    3.6   20.6
  92128.  400500.  830400.  182.3   10.0    0.8   21.7   16.7    2.0    3.6   19.4
  92131.  400500.  830400.  183.5   10.0    0.6   21.8   16.7    2.0    3.6   20.2
  92134.  400500.  830400.  183.5    9.6    0.7   21.9   16.5    2.0    3.6   15.5
  92137.  400500.  830400.  183.5    9.2    0.5   21.9   16.4    2.0    3.6   10.7
  92140.  400500.  830400.  183.5    9.2    0.5   21.7   16.5    2.0    3.6   11.4
  92143.  400500.  830400.  182.3    9.3    0.5   21.7   16.5    2.0    3.6   11.0
  92146.  400500.  830400.  183.5    9.3    0.5   21.6   16.4    2.0    3.6   10.5
  92149.  400500.  830400.  183.5    9.5    0.4   21.6   16.3    2.0    3.6    9.2
  92152.  400500.  830400.  183.5    9.2    0.3   21.7   16.3    2.0    3.6    9.3
  92155.  400500.  830400.  183.5    9.4    0.3   21.8   16.4    2.0    3.6    9.2
  92158.  400500.  830400.  183.5    9.5    0.3   21.5   16.7    2.0    3.5    9.2
  92201.  400500.  830400.  176.1    8.8    0.3   22.2   16.3    2.0    3.5 2052.3
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50 RECORDS AT END OF FILE

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  125849. 400352. 830615.  526.6  191.0    1.4   24.2   17.9    1.4    2.7   60.9
  125852. 400355. 830609.  531.6  197.9    1.3   24.3   18.0    1.4    3.8   60.4
  125855. 400358. 830604.  523.9  185.0    1.6   24.2   18.0    1.4    3.3   59.8
  125858. 400401. 830558.  531.6  182.5    2.0   24.3   18.2    1.4    5.4   59.7
  125901. 400404. 830552.  530.4  186.6    2.1   24.3   18.3    1.4    4.9   59.4
  125904. 400407. 830547.  514.3  198.6    2.0   24.1   18.2    1.4    5.8   60.2
  125907. 400409. 830541.  516.7  203.1    2.2   24.6   18.1    1.5    5.1   62.7
  125910. 400412. 830535.  530.4  192.5    2.0   24.7   18.5    1.5    5.4   63.1
  125913. 400415. 830529.  520.4  166.2    1.8   24.5   18.4    1.4    5.1   62.7
  125916. 400418. 830524.  513.0  137.7    1.9   24.3   18.0    1.4    4.4   62.6
  125919. 400421. 830518.  510.5  113.7    2.5   24.1   18.3    1.5    4.1   62.5
  125922. 400424. 830512.  495.7  111.6    2.2   24.1   18.8    1.5    4.0   62.3
  125925. 400426. 830506.  477.1  109.7    1.8   24.2   18.8    1.5    3.9   62.2
  125928. 400429. 830501.  456.0  113.7    1.5   24.2   18.5    1.4    4.0   60.6
  125931. 400432. 830455.  438.7  113.4    2.0   24.4   18.5    1.4    3.6   56.2
  125934. 400435. 830449.  425.1  110.0    2.2   24.5   18.7    1.5    2.9   53.6
  125937. 400438. 830443.  401.4  109.1    1.9   24.7   18.6    1.4    2.7   54.5
  125940. 400441. 830438.  343.3   99.6    2.0   24.9   18.3    1.4   -0.3   52.5
  125943. 400443. 830432.  337.1   97.1    2.0   25.1   18.4    1.4    1.8   54.2
  125946. 400446. 830426.  340.9   98.5    2.1   25.4   19.0    1.5    0.6   54.2
  125949. 400449. 830421.  319.8   93.9    2.4   25.6   19.1    1.5    0.5   54.4
  125952. 400452. 830415.  307.4   86.6    2.4   25.8   19.0    1.5    1.4   55.2
  125955. 400455. 830409.  292.5   80.7    2.3   26.0   18.9    1.5    0.9   54.4
  125958. 400458. 830403.  269.0   74.8    2.9   26.6   19.0    1.6    2.2   54.2
  130001. 400500. 830400.  313.6   69.0    3.2   27.1   19.1    1.6    3.5   54.6
  125002. 395535. 832302.  209.6   67.2    2.9   26.2   19.6    1.5   -0.7   50.9
  130002. 400500. 830400.  283.9   57.2    2.8   26.7   19.7    1.6    2.2   54.1
  130005. 400500. 830400.  269.0   44.7    2.9   27.0   19.6    1.5    1.5   49.9
  130008. 400500. 830400.  292.5   46.6    2.7   27.1   19.3    1.4    3.6   52.3
  130011. 400500. 830400.  304.9   44.1    2.5   27.6   19.0    1.5    3.7   50.1
  130014. 400500. 830400.  304.9   40.7    2.1   27.4   19.4    1.5    3.5   51.6
  130017. 400500. 830400.  304.9   38.8    2.2   27.4   19.6    1.4    3.6   52.4
  130020. 400500. 830400.  292.5   34.3    2.0   27.2   18.9    1.4    1.9   55.2
  130023. 400500. 830400.  277.7   29.9    1.6   27.3   18.5    1.4    1.2   55.5
  130026. 400500. 830400.  280.2   26.7    1.4   27.2   18.8    1.4    0.5   57.3
  130029. 400500. 830400.  262.8   24.7    1.3   27.1   19.0    1.4    0.4   57.6
  130032. 400500. 830400.  277.7   20.4    1.1   27.1   19.0    1.4    3.1   60.0
  130035. 400500. 830400.  277.7   19.6    0.8   27.1   19.0    1.4    1.2   61.6
  130038. 400500. 830400.  245.5   17.0    0.6   26.9   18.7    1.4   -2.9   58.7
  130041. 400500. 830400.  239.9   14.3    0.9   26.6   18.1    1.4   -0.3   57.0
  130044. 400500. 830400.  263.3   18.4    0.9   26.7   18.2    1.5    1.7   60.0
1.  DATA VALUES EXCEEDING 2000 ARE QUESTIONABLE. THEY HAVE BEEN FLAGGED BY
ADDITION OF 2000 TO THE ORIGINAL QUESTIONABLE VALUES.

2.  DATA VALUES EXCEEDING 9000 INDICATE INVALID DATA. THEY HAVE BEEN
FLAGGED BY ADDITION OF 9000 TO THE ORIGINAL DATA.

3.  TURBULENCE:  R UNIT = (CM**2/3)/S.

4.  NEPH:  NEPHELOMETER MEASURES BSCAT.


TOTAL OF  4435 RECORDS IN FILE SRIA01.813
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 50 RECORDS AT BEGINNING OF FILE

20   1  10  CHOP.813     08/13/80      0. SECONDS
PEPE/NEROS  1980                 EPA/EMI   AIRCRAFT(CHOPPER) DATA
(F8.0,2F9.4,F6.0,3F7.1,3F9.1)
TIME        LAT        LONG       ALT         O3         NO         NOX         BSCAT
TEMP        TDP
HHMMSS      DD.DDDDN   DD.DDDDW   m MSL       PPB        PPB        PPB         10E-4/m
DEG C       DEG C
      1663
 240000.   41.0000   84.0000 2500.  200.0   50.0   50.0      10.0      50.0      50.0
      0.   39.0000   82.0000    0.  -50.0  -20.0  -20.0      -5.0       0.0     -20.0
 113030.   40.0754   83.0844  132.   19.1    1.8    9.2       0.6      12.4      -0.1
 113231.   40.0754   83.0844  242.   34.7    0.9   13.4       1.0      26.5      13.7
 113331.   40.0754   83.0844  242.   34.7    0.9   11.7       1.0      26.9      14.2
 113431.   40.0754   83.0844  242.   34.9    0.9   12.6       1.0      27.1      13.6
 113531.   40.0754   83.0844  242.   37.1    1.8   12.6       1.0      27.6      14.2
 113631.   40.0754   83.0844  243.   36.1    1.8   11.7       1.0      27.8      14.7
 113731.   40.0754   83.0844  244.   35.5    2.8   13.4       1.0      26.9      15.2
 113831.   40.0754   83.0844  244.   37.1    3.7   16.0       1.0      26.0      14.8
 113931.   40.0754   83.0844  243.   36.8    2.8   16.0       1.1      27.0      15.5
 114031.   40.0754   83.0844  243.   34.5    1.8   14.3       1.1      27.9      15.3
 114131.   40.0754   83.0844  243.   34.7    0.9   12.6       1.1      27.8      15.0
 114231.   40.0754   83.0844  243.   35.6    0.0    3.3       1.1      28.2      14.7
 114331.   40.0754   83.0844  243.   36.3    0.0   -0.1       1.2      27.5      13.9
 114431.   40.0754   83.0844  244.   36.3    0.0   -0.1       1.2      27.5      14.2
 114531.   40.0754   83.0844  244.   37.0    0.0   -0.1       1.2      27.2      14.3
 114631.   40.0754   83.0844  244.   36.2    0.0   -0.1       1.3      27.6      14.2
 114731.   40.0754   83.0844  244.   37.0    0.0    0.7       1.3      27.3      13.4
 114831.   40.0754   83.0844  244.   37.9    0.0    0.9       1.3      27.3      13.5
 114908.   40.0754   83.0844  244.   40.0    0.0   -0.1       1.3      26.6      13.0
 114936.   40.0754   83.0844  244.   36.0    0.0   -0.1       1.3      27.0      10.7
 114946.   40.0754   83.0844  244.   37.3    0.0   -0.1       1.3      27.4      16.2
 114956.   40.0754   83.0844  244.   38.7    0.0    0.3       1.3      27.3      12.3
 115006.   40.0754   83.0844  244.   38.1    0.5    0.7       1.3      27.6      13.9
 115016.   40.0754   83.0844  244.   38.7    1.4    0.3       1.3      27.5      13.8
 115026.   40.0754   83.0844  244.   40.2    1.8   -0.1       1.3      27.4      14.7
 115036.   40.0754   83.0844  244.   40.4    1.8   -0.1       1.3      27.0      12.6
 115046.   40.0754   83.0844  244.   40.0    2.3   -0.1       1.2      27.1      14.5
 115056.   40.0754   83.0844  243.   39.6    2.8   -0.1       1.2      27.2      13.9
 115106.   40.0754   83.0844  244.   38.3    2.3   -0.1       1.2      27.0      11.6
 115116.   40.0754   83.0844  244.   37.3    1.4   -0.1       1.2      27.2      14.3
 115126.   40.0754   83.0844  244.   37.2    0.9   -0.1       1.2      27.4      12.7
 115136.   40.0754   83.0844  244.   36.6    0.9    0.3       1.2      27.7      13.1
 115146.   40.0754   83.0844  244.   37.0    0.9   -0.1       1.2      27.8      13.8
 115156.   40.0754   83.0844  244.   36.2    0.9    0.7       1.2      28.3      13.2
 115919.   40.0754   83.0844  243.   35.9  146.2  133.1       1.2      29.2      13.6
 115926.   40.0754   83.0844  243.   36.0  148.6  134.3       1.2      29.4      13.6
 115936.   40.0754   83.0844  244.   36.6  151.4  135.5       1.2      29.3      13.9
 115946.   40.0754   83.0844  244.   37.7  152.3  136.4       1.3      29.2      14.1
 115956.   40.0754   83.0844  244.   38.1  152.8  137.6       1.3      28.7      14.1
 120006.   40.0754   83.0844  243.   37.9  154.1  138.5       1.2      28.4      14.1

 50 RECORDS AT END OF FILE
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204613.  40.1913  82.5958 1215.   35.1    0.0   -0.1     1.7    18.1    13.7
204618.  40.1913  82.5958 1218.   35.1    0.0   -0.1     1.7    18.3    13.6
204623.  40.1913  82.5958 1234.   35.1    0.0   -0.1     1.7    17.9    13.5
204628.  40.1913  82.5958 1241.   34.3    0.0   -0.1     1.7    17.7    13.5
204633.  40.1913  82.5958 1241.   33.5    0.0   -0.1     1.7    18.0    13.4
204638.  40.1913  82.5958 1259.   35.2    0.9   -0.1     1.7    17.5    13.2
204643.  40.1913  82.5958 1271.   36.1    0.9   -0.1     1.7    17.4    12.1
204648.  40.1913  82.5958 1285.   35.3    0.0   -0.1     1.8    17.2    13.1
204653.  40.1913  82.5958 1297.   34.5    0.0    0.7     1.7    17.2    12.3
204658.  40.1913  82.5958 1309.   33.7    0.0    1.6     1.7    17.2    12.1
204703.  40.1913  82.5958 1322.   33.7    0.0    2.4     1.7    17.2    11.9
204708.  40.1913  82.5958 1339.   32.1    0.0    3.3     1.7    16.8    11.8
204713.  40.1913  82.5958 1350.   31.3    0.0    3.3     1.7    16.8    10.0
204718.  40.1913  82.5958 1362.   31.3    0.0    3.3     1.7    16.7    11.4
204723.  40.1913  82.5958 1374.   32.2    0.0   -0.1     1.7    16.7     9.1
204728.  40.1913  82.5958 1386.   33.1    0.0   -0.1     1.7    16.7    10.5
204733.  40.1913  82.5958 1400.   34.0    0.0    3.3     1.8    16.6    10.4
204738.  40.1913  82.5958 1371.   32.2    0.0    5.0     1.8    17.0    10.2
204743.  40.1913  82.5958 1380.   31.4    0.0    5.0     1.8    16.9    10.0
204748.  40.1913  82.5958 1433.   33.3    0.0    4.1     1.8    16.4     9.8
204753.  40.1913  82.5958 1452.   33.3    0.0    0.7     1.7    16.3     9.7
204758.  40.1913  82.5958 1466.   30.8    0.0    1.6     1.7    16.3     9.5
204803.  40.1913  82.5958 1477.   30.8    0.0    4.1     1.7    16.1     9.3
204808.  40.1913  82.5958 1439.   30.7    0.0    4.1     1.7    16.5     9.1
204813.  40.1913  82.5958 1476.   29.9    0.0    3.3     1.7    16.2     9.0
204818.  40.1913  82.5958 1534.   31.0    0.0    3.3     1.7    15.7     8.8
204823.  40.1913  82.5958 1558.   30.2    0.9    4.1     1.6    15.5     8.5
204828.  40.1913  82.5958 1579.   29.3    1.8    4.1     1.6    15.5     7.7
204833.  40.1913  82.5958 1599.   30.3    2.8    4.1     1.6    15.4     7.5
204838.  40.1913  82.5958 1617.   30.3    1.8    3.3     1.5    15.2     7.4
204843.  40.1913  82.5958 1628.   29.5    2.8    3.3     1.5    15.2     7.4
204848.  40.1913  82.5958 1644.   27.7    2.8    3.3     1.4    15.2     6.4
204853.  40.1913  82.5958 1661.   26.9    2.8    4.1     1.2    15.1     5.8
204858.  40.1913  82.5958 1679.   25.2    2.8    3.3     1.1    15.1     6.0
204903.  40.1913  82.5958 1693.   23.4    2.8    3.3     0.9    15.1     4.2
204908.  40.1913  82.5958 1711.   23.5    2.8    3.3     0.8    15.2     3.6
204913.  40.1913  82.5958 1725.   21.7    1.8    3.3     0.7    15.5    -0.7
204918.  40.1913  82.5958 1737.   19.1    1.8    2.4     0.6    15.7    -5.4
204923.  40.1913  82.5958 1750.   18.2    1.8    1.6     0.5    16.0    -8.2
204928.  40.1913  82.5958 1765.   17.3    1.8    1.6     0.4    16.2   -10.1
204933.  40.1913  82.5958 1780.   15.5    2.8    1.6     0.4    16.3    -7.7
204938.  40.1913  82.5958 1797.   15.6    2.8    1.6     0.3    16.4    -8.7
204943.  40.1913  82.5958 1816.   14.7    2.8    1.6     0.3    16.6   -11.9
204948.  40.1913  82.5958 1831.   14.7    1.8    1.6     0.2    16.8   -14.0
204953.  40.1913  82.5958 1844.   16.5    0.9    1.6     0.2    17.0   -14.5
204958.  40.1913  82.5958 1836.   16.5    1.8    2.4     0.1    17.6   -17.7
205003.  40.1913  82.5958 1836.   15.6    0.9    0.7     0.2    17.4   -14.5
205008.  40.1913  82.5958 1836.   15.6    0.9    0.7     0.2    17.4   -14.3
205013.  40.1913  82.5958 1830.   15.6    0.9    0.7     0.2    17.4   -13.3
205018.  40.1913  82.5958 1827.   15.6    0.9    0.7     0.2    17.6   -14.2

TOTAL OF  1673 RECORDS IN FILE CHOP.813
```

50 RECORDS AT BEGINNING OF FILE

```
20   3  21  UVDA01.813   8/13/80     5. MINUTES
PEPE/NEROS 1980               NASA-LARC ELECTRA UV-DIAL DATA
(8F10.1,/,8F10.1,/,5F10.1,30X)
TIME      LATD      LATM      LONGD     LONGM     ALT       CODE1     MIXHT
UNIT1     H2SIG     LWCCL     UNIT2     MXCLD     UNIT3     CODE2     TPUSL
UNIT4     CODE3     CODE4     MAXSG     C
HHMM,EDT  DEG       MIN       DEG       MIN       M MSL     CODE      METERS
CODE      METERS    METERS    CODE      METERS    CODE      CODE      METERS
CODE      CODE      CODE      M MSL     #
        33
    1415.0      40.0      59.1      84.0      51.8    1067.0       1.0    2180.0
       1.0     230.0    2210.0       1.0    2660.0       1.0       0.0    3530.0
       1.0       0.0       0.0    4430.0       0.0
    1135.0      37.0       1.0      78.0       2.0       0.0       0.0       0.0
       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0
       0.0       0.0       0.0       0.0       0.0
    1135.0      37.0      47.4      78.0      46.1       0.0       0.0       0.0
       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0
       0.0       0.0       0.0       0.0       0.0
    1140.0      37.0      52.2      79.0      15.5       0.0       0.0       0.0
       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0
       0.0       0.0       0.0       0.0       0.0
    1145.0      37.0      59.1      79.0      47.5     914.0       1.0    1550.0
       1.0     200.0    1430.0       1.0    1760.0       1.0       0.0    2060.0
       1.0       0.0       0.0    4430.0       0.0
    1150.0      38.0       5.1      80.0       3.0    1067.0       1.0    2150.0
       1.0      60.0    1640.0       1.0    2240.0       1.0       0.0    3530.0
       1.0       0.0       0.0    4430.0       0.0
    1155.0      38.0      12.6      80.0      43.1     823.0       1.0    2150.0
       1.0      90.0    2210.0       1.0    2150.0       1.0       0.0    3230.0
       1.0       0.0       0.0    4430.0       0.0
    1200.0      38.0      18.5      81.0      11.8     610.0       1.0    1160.0
       1.0     150.0     950.0       1.0    1550.0       1.0       0.0    2940.0
       1.0       0.0       0.0    4430.0       0.0
    1205.0      38.0      20.8      81.0      42.0     329.0       1.0    1130.0
       1.0     150.0    1130.0       1.0    1310.0       1.0       0.0    3230.0
       1.0       0.0       0.0    4430.0       0.0
    1210.0      38.0      28.2      82.0      11.0     229.0       1.0    1040.0
       1.0     150.0    1030.0       1.0    1130.0       1.0       0.0    3380.0
       1.0       0.0       0.0    4430.0       0.0
    1215.0      38.0      35.2      82.0      41.2     250.0       1.0    1040.0
       1.0     150.0    1030.0       1.0    1130.0       1.0       0.0    3350.0
       1.0       0.0       0.0    4430.0       0.0
    1220.0      38.0      40.6      83.0       9.1       0.0       0.0       0.0
       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0
       0.0       0.0       0.0       0.0       0.0
    1225.0      38.0      46.3      83.0      36.3     229.0       0.0    1050.0
       0.0     150.0     900.0       0.0    1880.0       0.0       0.0    1700.0
       0.0       0.0       0.0    3140.0       0.0
    1230.0      38.0      53.9      84.0       6.7     246.0       0.0    1680.0
```

50 RECORDS AT END OF FILE

```
       0.0       0.0       0.0    3050.0       0.0
    1330.0      40.0      20.7      82.0      40.7     427.0       0.0    1170.0
       0.0     200.0     870.0       0.0    1900.0       0.0       0.0    1650.0
       0.0       0.0       0.0    3050.0       0.0
    1335.0      40.0      35.8      83.0       6.6     325.0       0.0    1650.0
       0.0     150.0     930.0       0.0    1650.0       0.0       0.0 -100000.0
       0.0       0.0       0.0    3050.0       0.0
    1340.0      40.0      51.1      83.0      32.3       0.0       0.0       0.0
       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0
       0.0       0.0       0.0       0.0       0.0
    1345.0      40.0      59.0      83.0      20.3     253.0       0.0    1530.0
       0.0      90.0    1050.0       0.0    1600.0       0.0       0.0 -100000.0
       0.0       0.0       0.0    3020.0       0.0
    1350.0      40.0      43.0      82.0      49.1     327.0       0.0    1650.0
       0.0     150.0    1050.0       0.0    2040.0       0.0       0.0 -100000.0
       0.0       0.0       0.0    3020.0       0.0
    1355.0      40.0      27.6      82.0      15.5     310.0       0.0    1880.0
       0.0     150.0    1050.0       0.0    2100.0       0.0       0.0 -100000.0
       0.0       0.0       0.0    3020.0       0.0
    1400.0      40.0      13.3      81.0      38.1     310.0       0.0    1700.0
       0.0     140.0     990.0       0.0    1920.0       0.0       0.0 -100000.0
       0.0       0.0       0.0    3020.0       0.0
    1405.0      40.0       9.3      82.0       6.5       0.0       0.0       0.0
       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0
       0.0       0.0       0.0       0.0       0.0
    1410.0      39.0      54.0      82.0      44.0     310.0       0.0    1920.0
       0.0     120.0     980.0       0.0    2440.0       0.0       0.0 -100000.0
       0.0       0.0       0.0    2980.0       0.0
    1415.0      39.0      48.3      83.0       4.1     310.0       0.0    2180.0
       0.0     200.0     840.0       0.0    2660.0       1.0       0.0 -100000.0
       0.0       0.0       0.0    2980.0       0.0
ULTRAVIOLET DIFFERENTIAL LIDAR DATA MEASURED ABOARD NASA ELECTRA
NOTATIONS IN DATA SET:
    (A) CODE1=1 DENOTES VARIABLE TERRAIN; DETERMINATION OF SURFACE
        ELEVATION DIFFICULT; DEFAULT =0
    (B) MIXHT= MIXED LAYER HEIGHT IN m AGL IF UNIT1=0 (STANDARD), IN
        m MSL IF UNIT1 =1
    (C) H2SIG IS THE 2-SIGMA VARIATION IN THE MIXED HEIGHT
    (D) LWCCL = LOWEST CLOUD CONDENSATION LEVEL; STANDARD UNIT IS
        mAGL BUT IS mMSL IF UNIT2 =1
    (E) MXCLD = MAXIMUM CLOUD HEIGHT (mAGL IF UNIT3 = 0, mMSL IF
        UNIT3 = 1); CLOUDS SUSPECTED ABOVE INDICATED ALTITUDE IF
        CODE2 IS NOT 0.
    (F) TPUSL = TOP OF THE UPPER STABLE LAYER (mAGL IF UNIT4 =0,mMSL
        IF UNIT4 NOT 0).
    (G) CODE3 NOT 0 SIGNIFIES MULTIPLE LAYERING ABOVE THE MIXED LAYER;
        CODE4 NOT 0 DENOTES LAYERS SUSPECTED ABOVE INDICATED ALTITUDE
    (H) MAXSG = MAXIMUM SIGNAL HEIGHT IN mMSL OR THE MAXIMUM DETECTABLE
        ALTITUDE OF OBSERVATION
     * DATA VALUE = -100000.0 SIGNIFIES DATA NOT AVAILABLE.


TOTAL OF   134 RECORDS IN FILE UVDA01.813
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```
 50 RECORDS AT BEGINNING OF FILE

20   1   4  HRLA01.813   8/13/80     2. MINUTES
PEPE/NEROS 1980              NASA/WIS  ELECTRA HSRL DATA
(4F10.1,40X)
TIME      MEAN-HT   STD DEV   COMMENT
EDT       MAGL      m         CODE
        35
    1416.0    2296.0     320.0      10.0
    1210.0    1438.0      15.0       0.0
    1210.0    2037.0      32.0       0.0
    1212.0    2055.0      40.0       0.0
    1214.0    2012.0      37.0       0.0
    1215.0    1980.0      45.0       0.0
    1230.0    1787.0     146.0       0.0
    1232.0    1744.0     120.0       0.0
    1234.0    1712.0     219.0       0.0
    1236.0    1438.0     139.0      10.0
    1238.0    1914.0     214.0       0.0
    1240.0    1438.0      23.0       0.0
    1242.0    1583.0      53.0       0.0
    1244.0    1538.0     206.0       0.0
    1246.0    1509.0     230.0      10.0
    1248.0    1586.0      80.0       0.0
    1250.0    1888.0      63.0       0.0
    1252.0    1854.0      54.0       0.0
    1254.0    1952.0      39.0       0.0
    1256.0 -100000.0 -100000.0       1.0
    1344.0    1533.0      88.0      10.0
    1346.0    1462.0      67.0       0.0
    1348.0    1568.0     121.0       0.0
    1350.0    1778.0     166.0       0.0
    1352.0    1787.0     156.0       0.0
    1354.0    2019.0     143.0       0.0
    1356.0    2018.0     166.0       0.0
    1358.0    2100.0     320.0       0.0
    1400.0    1985.0     208.0       0.0
    1401.0    1692.0      62.0       0.0
    1404.0    1697.0      50.0       0.0
    1406.0    1781.0      15.0       0.0
    1408.0    1722.0      99.0       0.0
    1410.0    1685.0     166.0       0.0
    1412.0    2090.0     104.0       0.0
    1414.0    2171.0     217.0       0.0
    1416.0    2296.0     309.0       0.0
  AEROSOL LAYER HEIGHT MEASUREMENTS BY UNIVERSITY OF WISCONSIN HRSL (HIGH
  SPECTRAL RESOLUTION LIDAR) IN THE NASA-ELECTRA.
  HSRL FLIGHTS COINCIDE WITH THE UV-DIAL FLIGHTS.
  DEFINITIONS:
     MEAN HEIGHT = TWO-MINUTE AVERAGE OF AEROSOL HEIGHT MAXIMA MEASURED
     WITH 7-SEC. RESOLUTION
     STD DEV = THE TWO-MINUTE STANDARD DEVIATION OF MEAN HEIGHT


 11 RECORDS AT END OF FILE
```

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  COMMENT CODE DEFINITIONS:
        (1) = RETUNE AND CALIBRATION
        (2) = AEROSOL LAYER NOT WELL DEFINED
        (3) = LOWER LAYER VISIBLE
        (4) = NO SIGNAL DUE TO OBSCURATION BY CLOUDS
        (5) = LARGE VARIATON IN TERRAIN
        (6) = INITIAL STAGES OF CLOUD FORMATION
        (7) = SCATTERED CLOUDS
        (8) = OVER APPLACHIAN MOUNTAINS
        (9) = ELEVATED AEROSOL LAYER ONLY VISIBLE
       (10) = AIRCRAFT BANK

TOTAL OF    61 RECORDS IN FILE HRLA01.813
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```
 50 RECORDS AT BEGINNING OF FILE

20   3  26  ERLU.813     08/13/80     0. IREGULAR
PEPE/NEROS 1980              NOAA-ERL  TURBULENCE AIRCRAFT (UNFILTERED)
(3F8.0,7F8.3,/,10F8.3,/,6F8.3,32X)
DATE      TIMES     TIMEE     PRESSURE  TAS       MIDLAT    MIDLONG   HEADING
WSN       WSE       ALT       <W>       <V>       <U>       <RHOV>    <T>
<TV>      <O3>      <RAD DN>  <RAD UP>  <W"V">    <W"U">    <W"RHO">  <W"T">
<W"TV">   <W"O"3>
          HHMMSS    HHMMSS    mb        m/s       DEG       DEG       DEG
m/s       m/s       m MSL     m/s       m/s       m/s       g/m**3    DEG K
DEG K     PPB       DEG C     DEG C     N/m**2    N/m**2    W/m**2    W/m**2
W/m**2    ug/m2-s
        21
    813. 235959. 235959. 983.588  70.297  40.634 -82.438 119.893   3.010   5.417
1249.680   1.019   0.778   1.519  16.871 297.224 299.639  66.016  27.227  -1.013
   0.089   0.433 421.906  66.124  85.166   0.499
    813.      0.      0. 844.956  64.622  39.683 -83.425-172.226  -0.743  -2.101
  28.651  -0.612  -2.504  -1.373  12.757 286.861 289.046  25.276  22.526 -16.785
  -0.070  -0.037  60.983 -65.780 -49.059  -1.505
    813.  92704.  93139. 977.782  66.057  40.080 -83.345-169.263   1.187  -1.313
  42.062   0.401   0.739   0.401  15.370 293.469 295.851  25.276  22.526 -16.785
   0.009   0.046 146.852  17.666  28.750  -0.334
    813.  93248.  93635. 977.318  65.591  39.891 -83.393-172.226   1.155  -1.698
  33.223  -0.235  -0.428  -0.414  15.661 293.777 296.210  29.612  22.806 -15.772
  -0.003   0.043 115.717  25.889  34.835  -0.368
    813.  93728.  93950. 977.438  65.585  39.743 -83.425-171.999   0.179  -2.101
  28.651  -0.174   0.115  -0.822  16.517 293.883 296.452  27.264  23.286 -14.861
  -0.006   0.047 107.452  23.624  31.923  -0.343
    813.  94400.  95758. 956.550  66.280  39.688 -83.090  91.780   1.750  -0.378
 263.652   0.427  -0.958  -1.373  14.966 292.992 295.355  41.200  23.346 -15.203
  -0.016   0.011  60.983 -16.953 -12.696  -0.530
    813. 100240. 100905. 983.588  65.941  39.687 -82.932 -91.514   1.224  -1.306
  46.330  -0.050  -0.952   0.292  16.072 294.431 296.923  28.046  24.290 -12.187
   0.014   0.091 216.266  38.929  55.070  -0.887
    813. 101104. 101537. 979.026  64.622  39.683 -83.300 -92.699   1.779  -1.663
  44.196   0.092   0.662  -0.557  16.871 294.283 296.910  29.400  24.667 -11.799
  -0.016   0.129 169.256  52.440  65.852  -0.424
    813. 102400. 103006. 955.946  66.129  39.795 -83.414   9.413   3.010  -1.152
 211.531  -0.550  -0.706   0.399  16.131 292.988 295.538  35.520  24.615 -13.543
  -0.020   0.060 227.866  -0.460  16.173  -1.187
    813. 103008. 103644. 955.966  66.577  40.047 -83.370   9.294   2.972  -0.566
 221.590   0.366   0.197   0.116  15.589 292.994 295.458  36.714  24.588 -13.752
  -0.021   0.052 136.470   8.210  18.335  -0.330
    813. 104304. 104830. 978.192  65.805  40.272 -83.107  87.428   1.575   0.193
  45.110  -0.153  -0.813   0.580  15.275 294.997 297.388  33.672  24.922 -12.797
  -0.025   0.063 285.074  58.161  80.231  -0.717
    813. 104848. 105721. 972.892  66.007  40.286 -82.750  87.818   0.844   0.348
  47.549   0.740   0.752  -0.994  13.845 294.778 296.952  36.160  24.671 -13.028
  -0.019  -0.037 236.639  66.124  84.692  -0.681
    813. 105920. 111358. 955.792  66.820  40.255 -82.932-101.943   0.790  -0.455
 216.103   0.699   0.778  -0.043  14.422 293.459 295.745  38.251  25.419 -13.264


 49 RECORDS AT END OF FILE
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```
  -0.061    0.046 120.891  31.939  41.284  -0.931
    813. 132816. 134412. 945.765  67.269  40.488 -82.603  29.574   0.796   3.409
 238.049  -0.291  -0.438  -0.016  13.983 294.524 296.779  58.326  26.638  -1.013
   0.050   0.287 338.400  49.571  75.522  -1.366
    813. 134640. 140227. 964.063  66.747  40.510 -82.542-150.502  -0.164   2.492
  81.382   0.447  -2.504   0.258  14.213 296.417 298.695  57.069  26.774  -1.344
   0.018   0.147 288.323  62.738  85.166  -1.505
    813. 140704. 142248. 910.327  68.188  40.480 -82.619  30.021   0.842   3.855
 571.195  -0.612  -0.511   1.314  13.839 291.695 293.970  60.642  26.304  -5.664
  -0.041   0.433 397.337  -6.731  22.687   0.499
    813. 142800. 143440. 877.624  70.297  40.634 -82.438-147.008   0.845   4.109
 944.880   1.019  -0.247  -0.673  12.852 288.891 291.039  58.224  25.484 -11.030
   0.089   0.066 275.686 -10.275   9.419  -0.549
    813. 143440. 144353. 877.623  69.597  40.365 -82.636-148.475   0.344   3.334
 944.880   0.236   0.196  -1.224  13.526 289.309 291.578  66.016  26.373 -13.486
  -0.070   0.312 421.906 -30.725  -0.684  -0.244
    813. 145424. 150213. 844.956  69.856  40.429 -82.913 -29.425   1.132   5.417
1249.680   0.214  -0.943   0.451  12.757 286.861 289.046  55.240  24.092  -9.752
   0.002   0.127 243.032 -65.780 -49.059   0.261
    813. 151024. 152757. 944.846  67.225  40.358 -82.523 118.999  -0.743   3.403
 268.529  -0.526  -0.189   1.519  14.521 295.468 297.828  58.611  27.052 -10.455
   0.079   0.286 302.617  23.125  46.420  -1.293
    813. 153136. 155127. 962.883  66.665  40.328 -82.478 -61.199  -0.047   2.745
 106.070   0.079  -1.049  -0.774  14.957 297.224 299.639  60.367  27.227  -5.876
   0.035   0.054 270.551  53.804  75.033  -1.049
    813. 155600. 161238. 910.366  68.092  40.389 -82.626 119.893  -0.657   3.264
 577.596  -0.587  -0.261  -1.369  14.472 292.706 295.102  64.806  25.956  -6.433
   0.056   0.176 183.678  -4.509   8.972  -0.675
    813. 161488. 163145. 876.680  69.813  40.396 -82.579 -61.596   0.919   3.345
 944.880   0.250  -0.423  -0.873  14.069 289.847 292.219  63.421  25.464  -9.967
  -0.006   0.144 237.745 -23.765  -6.886  -0.175
 COMMENTS:
 ---------
 (1) NOAA-ERL (Boulder) Turbulence Aircraft Data.
 Each record in this file contains selected data averaged over an entire
 event (some longer than 1000 sec). The raw data collection was at 40 Hz.
 The data in this file are unfiltered.
 (2) TIMES,TIMEE = Start and end times of event.
     TAS         = True air speed (computed based on gust probe)
     MIDLAT,MIDLONG = co-ordinates of mid-point of event (in decimal degrees).
     WSN,WSE     = Speed of wind steered from aircraft co-ordinates.
                   Positive values indicate components of wind flowing to
                   north and to east.
     U,V,W       = along across and vertical components of wind relative
                   to mean air motion. (Right-handed co-ordinate system)
     RHOV        = water vapor density
     RAD DN, RAD UP = radiometer, down and up looking.
 (3) The last 15 variables in each record (<W> ....<W"O3">) represent
 detrended data. Details in data volume.


TOTAL OF    99 RECORDS IN FILE ERLU.813
```

```
 50 RECORDS AT BEGINNING OF FILE

20   3  26  ERLF.813     08/13/80     0. IREGULAR
PEPE/NEROS 1980                NOAA-ERL  TURBULENCE AIRCRAFT (FILTERED)
(3F8.0,7F8.3,/,10F8.3,/,6F8.3,32X)
DATE      TIMES     TIMEE     PRESSURE  TAS       MIDLAT    MIDLONG   HEADING
WSN       WSE       ALT       <W>       <V>       <U>       <RHOV>    <T>
<TV>      <O3>      <RAD DN>  <RAD UP>  <W"V">    <W"U">    <W"RHO">  <W"T">
<W"TV">   <W"O"3>
          HHMMSS    HHMMSS    mb        m/s       DEG       DEG       DEG
m/s       m/s       m MSL     m/s       m/s       m/s       g/m**3    DEG K
DEG K     PPB       DEG C     DEG C     N/m**2    N/m**2    W/m**2    W/m**2
W/m**2    ug/m2-s
        21
     813. 235959. 235959. 984.124  70.255  40.634 -82.438 119.910   3.025   5.480
1249.680   1.016   0.779   1.517  16.890 297.225 299.640  65.972  27.206  -0.917
   0.072   0.297 339.579  58.835  78.564  -0.006
     813.      0.      0. 844.950  64.672  39.683 -83.424-171.865  -0.738  -2.255
  30.480  -0.623  -2.514  -1.378  12.761 286.858 289.043  25.524  22.523 -16.784
  -0.136  -0.030  11.312 -33.110 -25.849  -1.145
     813.  92704.  93010. 977.895  66.057  40.080 -83.345-168.650   1.242  -1.461
  41.148   0.400   0.744   0.418  15.371 293.467 295.849  25.524  22.523 -16.784
   0.003   0.041 146.000  15.631  26.628  -0.450
     813.  93248.  93506. 977.112  65.487  39.890 -83.393-171.800   1.126  -1.699
  33.833  -0.227  -0.409  -0.397  15.665 293.785 296.219  29.717  22.781 -15.775
   0.002   0.060 126.604  28.200  37.983  -0.456
     813.  93728.  93821. 977.288  65.503  39.742 -83.424-171.865  -0.040  -2.255
  30.480  -0.174   0.196  -0.793  16.535 293.869 296.441  27.115  23.344 -14.863
   0.000   0.071  89.498  18.904  25.810  -0.197
     813.  94400.  95628. 956.591  66.243  39.688 -83.090  91.787   1.751  -0.331
 267.005   0.425  -0.958  -1.378  14.965 292.992 295.355  41.213  23.348 -15.203
  -0.003   0.004  11.312   2.644   3.505  -0.092
     813. 100240. 100734. 984.124  66.166  39.686 -82.932 -91.445   1.112  -1.175
  46.330  -0.050  -0.955   0.289  16.066 294.430 296.921  28.081  24.310 -12.191
  -0.016   0.060 147.165  33.317  44.799  -0.480
     813. 101104. 101408. 979.186  64.672  39.683 -83.300 -92.947   1.775  -1.605
  44.806   0.095   0.663  -0.563  16.890 294.282 296.913  29.309  24.613 -11.805
  -0.028   0.132 166.799  50.930  64.155  -0.351
     813. 102400. 102835. 955.835  66.027  39.794 -83.413   9.236   3.025  -1.156
 213.055  -0.553  -0.707   0.396  16.132 292.985 295.535  35.501  24.604 -13.548
  -0.025   0.042 192.554  -1.787  12.296  -0.998
     813. 103008. 103513. 956.034  66.563  40.046 -83.370   8.795   2.988  -0.585
 221.590   0.364   0.211   0.112  15.587 292.999 295.462  36.731  24.539 -13.752
  -0.020   0.041 130.356   4.037  13.675  -0.448
     813. 104304. 104701. 978.398  65.811  40.271 -83.106  87.043   1.525   0.156
  44.501  -0.155  -0.806   0.564  15.288 294.996 297.389  33.548  24.916 -12.795
  -0.020   0.065 221.158  50.519  67.687  -0.713
     813. 104848. 105552. 972.596  65.828  40.286 -82.751  87.870   0.771   0.354
  46.939   0.736   0.750  -0.997  13.847 294.776 296.950  36.154  24.636 -13.026
  -0.029  -0.030 239.258  58.835  77.386  -0.673
     813. 105920. 111228. 955.859  66.800  40.255 -82.931-102.020   0.766  -0.502
 217.932   0.703   0.779  -0.045  14.420 293.460 295.745  38.261  25.416 -13.263


 50 RECORDS AT END OF FILE
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```
   0.010    0.249 276.888  54.654  75.945  -0.938
    813. 134640. 140056. 964.121  66.755  40.509 -82.541-150.526  -0.187   2.490
  77.724    0.452  -2.514   0.259  14.215 296.418 298.696  57.027  26.741  -1.286
  -0.005    0.151 289.515  56.099  78.564  -0.978
    813. 140704. 142119. 910.422  68.219  40.479 -82.620  29.859   0.780   3.951
 566.318   -0.623  -0.515   1.319  13.838 291.696 293.971  60.634  26.316  -5.695
  -0.082    0.297 339.579   8.707  33.737  -0.524
    813. 142800. 143311. 877.607  70.255  40.634 -82.438-146.942   0.974   4.150
 944.880    1.016  -0.217  -0.658  12.845 288.890 291.037  58.219  25.502 -11.162
   0.072    0.032 215.056  -9.513   5.841  -0.270
    813. 143440. 144222. 877.517  69.544  40.364 -82.636-149.111   0.362   3.310
 944.880    0.218   0.203  -1.215  13.505 289.313 291.579  65.972  26.394 -13.512
  -0.136    0.231 327.265 -16.480   6.759  -0.172
    813. 145424. 150044. 844.950  69.690  40.428 -82.912 -32.009   1.097   5.480
1249.680    0.215  -0.960   0.487  12.761 286.858 289.043  55.248  24.101  -9.488
   0.063   -0.015 106.855 -33.110 -25.849  -0.006
    813. 151024. 152626. 944.819  67.279  40.357 -82.522 119.010  -0.738   3.495
 264.566   -0.526  -0.197   1.517  14.523 295.466 297.827  58.614  27.059 -10.468
   0.067    0.184 246.613  32.118  50.966  -1.145
    813. 153136. 154957. 962.901  66.718  40.327 -82.477 -61.335  -0.087   2.741
 102.413    0.088  -1.049  -0.782  14.963 297.225 299.640  60.342  27.206  -5.760
   0.042    0.063 247.675  48.629  67.898  -0.927
    813. 155600. 161108. 910.368  68.133  40.388 -82.626 119.910  -0.608   3.291
 576.072   -0.587  -0.265  -1.354  14.472 292.707 295.102  64.811  25.963  -6.456
   0.041    0.132 183.726   3.625  17.083  -0.479
    813. 161488. 163015. 876.700  69.963  40.396 -82.578 -61.535   0.940   3.356
 944.880    0.247  -0.427  -0.873  14.066 289.848 292.219  63.434  25.478 -10.082
   0.045    0.122 181.080 -20.342  -7.617  -0.366
 COMMENTS:
 ---------
 (1) NOAA-ERL (Boulder) Turbulence Aircraft Data.
 Each record in this file contains selected data averaged over an entire
 event (some longer than 1000 sec). The raw data collection was at 40 Hz.
 The data in this file are filtered.
 The details of the filtering technique are given in the hard copy data
 volume of the NOAA Aircraft Data of the PEPE-NEROS project. If you
 are interested in such details or in the detailed 40 Hz data, contact either
 Noor Gillani, WU, (314)-889-6079, or Jason Ching, EPA , (919)- 541 - 4801
 (2) TIMES,TIMEE = Start and end times of event.
     TAS          = True air speed (computed based on gust probe)
     MIDLAT,MIDLONG = co-ordinates of mid-point of event (in decimal degrees).
     WSN,WSE      = Speed of wind steered from aircraft co-ordinates.
                    Positive values indicate components of wind flowing to
                    north and to east.
     U,V,W        = along across and vertical components of wind relative
                    to mean air motion. (Right-handed co-ordinate system)
     RHOV         = water vapor density
     RAD DN, RAD UP = radiometer, down and up looking.
 (3) The last 15 variables in each record (<W> ....<W"O3">) represent
 detrended data. Details in data volume.


TOTAL OF   103 RECORDS IN FILE ERLF.813
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 50 RECORDS AT BEGINNING OF FILE

20   2  16  EMIG.813    08/13/80     0. IREGULAR
PEPE/NEROS 1980               EMI       AIR QUALITY MOBILE LAB(AQML) GROUND DATA
(8F10.1)
TIME      LAT       LONG      UTM X     UTM Y     UTM Zone  TBS 1     AGC 1
TBS 2     AGC 2     SO2       SO4       NOx       O3        bSCAT     FLOW
HHMMSS    DDMMSS N  DDMMSS W  METERS    METERS    --        PPMM      mV
PPMM      mV        PPB       PPB       PPB       PPB       10^-4/M   CFM
      1930
  240000.0  410000.0  850000.0  800000.0 4500000.0      17.0    2200.0    2500.0
    2200.0    2500.0     200.0     100.0    1500.0     250.0      10.0      10.0
       0.0  370000.0  790000.0  200000.0 4000000.0      16.0    -600.0     -25.0
    -600.0     -25.0     -10.0       0.0     -50.0       0.0       0.0       0.0
  101106.0  400434.0  830519.0  321900.0 4438100.0      17.0    -153.1     914.0
       4.1     674.0      10.0    -999.9       0.0       0.0    -999.9       0.0
  101122.0  400434.0  830519.0  321900.0 4438100.0      17.0    -154.9     915.0
       0.0     673.0      10.1    -999.9       0.0      23.5    -999.9       0.0
  101132.0  400434.0  830519.0  321900.0 4438100.0      17.0    -144.0     915.0
       0.0     672.0      10.2    -999.9       0.5      26.4    -999.9       0.0
  101142.0  400434.0  830519.0  321900.0 4438100.0      17.0    -145.9     915.0
       0.0     672.0      10.4    -999.9       0.0      26.4    -999.9       0.0
  101152.0  400434.0  830519.0  321900.0 4438100.0      17.0    -156.7     914.0
       2.0     673.0      10.1    -999.9       1.0      35.9    -999.9       0.0
  101202.0  400434.0  830519.0  321900.0 4438100.0      17.0    -153.7     916.0
       3.4     672.0      10.0    -999.9       1.5      33.1    -999.9       0.0
  101212.0  400434.0  830519.0  321900.0 4438100.0      17.0     324.4     961.0
      24.0     675.0       9.9    -999.9       0.5      27.3    -999.9       0.0
  101222.0  400434.0  830519.0  321900.0 4438100.0      17.0     346.0     961.0
      58.8     680.0      11.1    -999.9       0.5      21.6    -999.9       0.0
  101232.0  400434.0  830519.0  321900.0 4438100.0      17.0     342.9     959.0
      58.8     679.0      14.8    -999.9       0.0      11.1    -999.9       0.0
  101242.0  400434.0  830519.0  321900.0 4438100.0      17.0     349.7     961.0
      58.8     679.0      14.6    -999.9       0.5       0.0    -999.9       0.0
  101252.0  400434.0  830519.0  321900.0 4438100.0      17.0     348.6     959.0
      58.7     674.0      14.4    -999.9       0.0       0.0    -999.9       0.0
  101302.0  400434.0  830519.0  321900.0 4438100.0      17.0     340.6     960.0
      58.7     675.0      14.2    -999.9      -0.5       0.0    -999.9       0.0
  101312.0  400434.0  830519.0  321900.0 4438100.0      17.0     340.5     959.0
      58.7     682.0      14.3    -999.9      -0.5       0.0    -999.9       0.0
  101322.0  400434.0  830519.0  321900.0 4438100.0      17.0     348.3     959.0
      58.7     680.0      14.8    -999.9      -0.5       0.0    -999.9       0.0
  101332.0  400434.0  830519.0  321900.0 4438100.0      17.0     358.0     959.0
      58.7     682.0      14.9    -999.9       0.0       0.0    -999.9       0.0
  101342.0  400434.0  830519.0  321900.0 4438100.0      17.0     355.9     959.0
      58.7     682.0      15.2    -999.9      -0.5       0.0    -999.9       0.0
  101352.0  400434.0  830519.0  321900.0 4438100.0      17.0     354.8     958.0
      58.7     680.0      15.5    -999.9       0.0       0.0    -999.9       0.0
  101402.0  400434.0  830519.0  321900.0 4438100.0      17.0     351.8     958.0
      58.6     682.0      15.1    -999.9       0.0       0.0    -999.9       0.0
  101412.0  400434.0  830519.0  321900.0 4438100.0      17.0     343.8     958.0
      58.6     680.0      15.2    -999.9       0.0       0.0    -999.9       0.0


 50 RECORDS AT END OF FILE
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```
  182851.0  400627.0  830559.0  321033.0 4441600.0      17.0      -0.6    1151.0
      35.5     776.0      13.8    -999.9      51.7      46.5    -999.9       0.0
  182900.0  400621.0  830559.0  321023.0 4441410.0      17.0       7.9    1153.0
      41.9     778.0      13.4    -999.9      63.0      36.9    -999.9       0.0
  182908.0  400615.0  830559.0  321018.0 4441210.0      17.0     -29.8    1153.0
      45.9     777.0      12.8    -999.9      63.6      35.0    -999.9       0.0
  182917.0  400608.0  830600.0  321007.0 4441020.0      17.0       9.6    1153.0
      46.8     778.0      12.5    -999.9      51.2      48.4    -999.9       0.0
  182926.0  400602.0  830600.0  320995.0 4440820.0      17.0      36.2    1155.0
      45.4     778.0      12.2    -999.9      43.5      47.4    -999.9       0.0
  183013.0  400555.0  830600.0  320986.0 4440620.0      17.0       4.7    1155.0
      46.1     777.0      13.1    -999.9      65.1      36.9    -999.9       0.0
  183024.0  400549.0  830601.0  320972.0 4440430.0      17.0       3.1    1158.0
      51.8     779.0      13.1    -999.9      79.5      40.7    -999.9       0.0
  183034.0  400543.0  830601.0  320959.0 4440230.0      17.0       1.5    1161.0
      41.0     783.0      12.9    -999.9      69.2      41.7    -999.9       0.0
  183043.0  400537.0  830601.0  320945.0 4440040.0      17.0     -21.1    1156.0
      44.2     780.0      12.5    -999.9      66.1      46.5    -999.9       0.0
  183051.0  400530.0  830602.0  320931.0 4439840.0      17.0     -33.4    1157.0
      45.2     778.0      12.5    -999.9      73.9      40.7    -999.9       0.0
  183100.0  400524.0  830602.0  320917.0 4439650.0      17.0     -14.2    1158.0
      46.1     782.0      12.3    -999.9      67.7      46.5    -999.9       0.0
  183109.0  400517.0  830603.0  320902.0 4439450.0      17.0      -0.3    1159.0
      46.2     780.0      12.0    -999.9      56.3      48.4    -999.9       0.0
  183118.0  400511.0  830603.0  320887.0 4439250.0      17.0      76.5    1166.0
      46.4     782.0      12.3    -999.9     166.0      10.1    -999.9       0.0
  183127.0  400505.0  830603.0  320874.0 4439060.0      17.0      14.5    1164.0
      49.6     780.0      12.9    -999.9      97.0      24.5    -999.9       0.0
  183141.0  400458.0  830604.0  320859.0 4438860.0      17.0      -2.5    1160.0
      56.1     780.0      12.5    -999.9      89.3      26.4    -999.9       0.0
  183203.0  400452.0  830604.0  320846.0 4438670.0      17.0    -121.5    1189.0
      58.0     781.0      12.9    -999.9     153.2      30.2    -999.9       0.0
  183215.0  400446.0  830605.0  320832.0 4438470.0      17.0      35.2    1167.0
      62.9     781.0      12.0    -999.9      63.6      59.9    -999.9       0.0
  183227.0  400439.0  830605.0  320818.0 4438270.0      17.0     -11.2    1167.0
      60.8     782.0      11.9    -999.9     130.5      27.3    -999.9       0.0
  183253.0  400436.0  830601.0  320921.0 4438170.0      17.0     -37.8    1178.0
      66.7     781.0      12.5    -999.9      57.4      68.5    -999.9       0.0
  183306.0  400436.0  830552.0  321116.0 4438160.0      17.0     -57.9    1193.0
      73.2     784.0      12.2    -999.9      36.8      93.4    -999.9       0.0
  183318.0  400435.0  830544.0  321312.0 4438140.0      17.0     -62.1    1197.0
      62.4     782.0      11.6    -999.9      35.7      94.3    -999.9       0.0
  183330.0  400435.0  830536.0  321509.0 4438130.0      17.0       3.0    1211.0
      48.4     797.0      11.8    -999.9      33.7      95.3    -999.9       0.0
  183342.0  400435.0  830527.0  321704.0 4438120.0      17.0     -52.0    1196.0
      56.5     784.0      11.6    -999.9      35.7      77.1    -999.9       0.0
  183354.0  400434.0  830519.0  321900.0 4438100.0      17.0     -24.1    1196.0
      59.0     783.0      12.3    -999.9      34.2      70.4    -999.9       0.0
 Latitudes and Longitudes in DDMMSS Format, not Decimal
 Channels 12 and 15 are Empty or Non-Functional for Entire Day


TOTAL OF  3874 RECORDS IN FILE EMIG.813
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```
 50 RECORDS AT BEGINNING OF FILE

20   4  29  UMCG.813       8/13/80      0. IREGULAR
PEPE/NEROS 1980                 U. MINN   UMHL CONTINUOUS (SUMMARY)
(4F10.1,F10.6,3F10.1,/,8F10.1,/,F10.1,2F10.6,5F10.1,/,5F10.1,30X)
DATE      TIMEST    TIMEND    ANC       BSCAT     SO2A      NO        NO2
OZONE     UV        BBND      RH        TDP       TO        WS        WD
sE1NC     sBSCT     sSO2A     sNO       sNO2      sOZONE    sUV       sBBND
sRH       sTDP      sTO       sWS       sWD
YYMMDD    HHMMSS    HHMMSS    PART/CC   M**-1     PPB       PPB       PPB
PPB       W/M**2    W/M**2    %         DEGC      DEGC      M/SEC     DEG-CWN
PART/CC   M**-1     PPB       PPB       PPB       PPB       W/M**2    W/M**2
%         DEGC      DEGC      M/SEC     DEG-CWN
         9
  800813.0  234714.0  220035.0   38700.0  0.000238       7.0       8.0      32.0
     100.0       0.0       7.0      83.0      18.5      28.8       5.3     289.0
   23000.0  0.000480  0.200000       1.0       9.0       8.0       7.0       0.0
       4.0       4.0       0.8       0.7       1.0
  800813.0       0.0       0.0       0.0  0.000000       0.0       0.0       0.0
       0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0
       0.0  0.000000  0.000000       0.0       0.0       0.0       0.0       0.0
       0.0       0.0       0.0       0.0       0.0
  800813.0  234714.0    1959.0    6200.0  0.000238 -100000.0       3.0      26.0
      51.0       0.0       4.0      79.0      18.1      21.9       2.1     209.0
   23000.0  0.000480  0.200000       0.0       9.0       8.0       2.0       0.0
       0.0       3.0       0.5       0.1       0.3
  800813.0    5014.0   13229.0   10600.0  0.000210       7.0       2.0      27.0
      31.0       0.0       4.0      83.0      18.3      21.3       1.6     225.0
       0.0  0.000040  0.110000       1.0       4.0       4.0       3.0       0.0
       1.0       3.0       0.6       0.1       0.8
  800813.0   13229.0   14444.0   11600.0  0.000226       7.0       5.0      32.0
      37.0       0.0       4.0      83.0      18.5      21.4       2.7     284.0
    1000.0  0.000010  0.090000       0.0       3.0       5.0       4.0       0.0
       1.0       4.0       0.8       0.1       1.0
  800813.0   20944.0   32029.0    8000.0  0.000133       6.0       2.0      12.0
      65.0       0.0       7.0      83.0      16.6      19.5       2.3     289.0
    2000.0  0.000060  0.110000       1.0       3.0       4.0       4.0       0.0
       4.0       3.0       0.5       0.1       0.8
  800813.0  101944.0  113014.0   17500.0  0.000164       5.0       8.0      29.0
      62.0       0.0       4.0 -100000.0 -100000.0      25.3       4.1     231.0
   10000.0  0.000450  0.100000       1.0       3.0       4.0       7.0       0.0
       0.0       0.0       0.0       0.7       0.8
  800813.0  123744.0  131429.0   38700.0  0.000175       5.0       5.0      18.0
      89.0       0.0       4.0 -100000.0 -100000.0      27.5       5.3     223.0
   12000.0  0.000080  0.090000       1.0       3.0       4.0       3.0       0.0
       0.0       0.0       0.0       0.2       0.7
  800813.0  140017.0  143029.0   27000.0  0.000131       7.0       3.0      16.0
     100.0       0.0       4.0 -100000.0 -100000.0      28.8       4.7     252.0
   14000.0  0.000210  0.070000       1.0       3.0       4.0       4.0       0.0
       0.0       0.0       0.0       0.3       0.9
  800813.0  155920.0  165905.0   16400.0  0.000056       7.0       3.0      10.0
      69.0       0.0       4.0 -100000.0 -100000.0      28.5       4.6     263.0

 17 RECORDS AT END OF FILE
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```
  15000.0  0.000050  0.060000       1.0       3.0       3.0       2.0       0.0
      0.0       0.0       0.0       0.6       0.9
 800813.0  195835.0  220035.0   15000.0  0.000130       4.0       2.0      13.0
     62.0 -100000.0 -100000.0 -100000.0 -100000.0      23.7       2.2     275.0
  19000.0  0.000050  0.080000       1.0       3.0       4.0       5.0       0.0
      0.0       0.0       0.0       0.6       0.2
 COMMENTS:
 (1) TIMEST, TIMEND  =  START/END TIMES (LDT) OF EVENT
 (2) PARAMETER VALUES ARE AVERAGED FOR EVENT DURATION.
 (3) PARAMETER NAMES PRECEDED BY "S" REPRESENT STANDARD DEVIATIONS ABOUT
     AVERAGE VALUES.
 (4) NON-OBVIOUS PARAMETER NAME DEFINITIONS:
       BBND  = BROAD-BAND SOLAR RADIATION
       UV    = ULTRAVIOLET RADIATION
       TO    = OUTSIDE TEMP
       TDP   = DEW-POINT TEMP
       WS/WD = WIND SPEED/DIRECTION

TOTAL OF     67 RECORDS IN FILE UMCG.813
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50 RECORDS AT BEGINNING OF FILE

```
20   4  32  UMPG.813      8/13/80      0. IREGULAR
PEPE/NEROS 1980                 U. MINN   UMHL PARTICULATE (SUMMARY)
(4F10.1,F12.0,F10.1,2F9.1,/,8F10.1,/,F10.1,F10.6,6F10.1,/,3F10.2,3F10.1,2F10.2)
DATE      TIME      CODE1     CODE2     ANC       NT        VA        BSCAT
OZONE     SO2       NOX       RH        TDP       T0        TEAA      WS
WD        BSEA      NO-       NO2       UV        BBNO      VT        NN
DPNN      SGNN      VN        NA        SA        DPNA      DPVA      SGVA
YYMMDD    HHMMSS    #         #         PART/CC   PART/CC   UM**3     10-4M
PPB       PPB       PPB       %         DEGC      DEGC      DEGC      M/SEC
DEG       M**-1     PPB       PPB       W/M**2    W/M**2    UM3/CM3   PART/CC
UM                  UM3/CM3   PART/CC   UM2/CM3   UM
        96
  800813.0  235745.0       3.0       5.0      38500.   32100.0    194.1      0.0
     102.0      10.0      55.0     100.0      20.2      28.9      26.9       7.0
     340.0  0.001310      46.0      38.0       0.0       4.0     201.4   25600.0
      0.04      1.70      0.53   12940.0    2104.0     194.1      0.30      0.65
  800813.0       0.0       0.0       0.0       -700.       0.0      0.0    -10.0
       0.0       0.0     -11.0       0.0       0.0       0.0       0.0       0.0
       0.0  0.000000     -24.0      -1.0       0.0       0.0       0.0       0.0
      0.00      0.00      0.00       0.0       0.0       0.0      0.00      0.00
  800813.0  231606.0       0.0       5.0       -600.   10000.0    194.1    -10.0
 -100000.0       4.0       3.0      79.0      18.1      21.8      26.7       2.8
     190.0  0.001310       1.0       2.0       0.0       3.0     201.4    3900.0
      0.02      1.20      0.02    6100.0    2104.0     194.1      0.30      0.65
  800813.0  233514.0       0.0       0.0       -700.    9200.0     23.6      0.0
       1.0       8.0       3.0      79.0      18.3      22.1      26.9       2.1
     205.0  0.000119       1.0       2.0       0.0       4.0      26.3    3300.0
      0.03      1.50      0.06    5880.0     550.0      23.6      0.13      0.30
  800813.0  234425.0       0.0       0.0       -700.    8800.0     21.7      0.0
      56.0 -100000.0      55.0      79.0      18.3      22.0      26.9       1.6
     199.0  0.000106      46.0       9.0       0.0       4.0      24.9    2800.0
      0.03      1.60      0.06    6030.0     527.0      21.7      0.13      0.28
  800813.0     103.0       0.0       0.0       4100.    8300.0     21.4      0.0
      45.0 -100000.0      23.0      78.0      17.9      21.9      26.6       1.7
     192.0  0.000105       3.0      20.0       0.0       4.0      23.4    2600.0
      0.03      1.70      0.05    5700.0     510.0      21.4      0.13      0.29
  800813.0    2009.0       0.0       0.0      11500.    7100.0     23.7      0.0
      52.0 -100000.0      30.0 -110000.0 -110000.0      22.0      26.1       2.5
     217.0  0.000078       2.0      27.0       0.0       4.0      25.3    2000.0
      0.03      1.30      0.05    5130.0     515.0      23.7      0.13      0.32
  800813.0    3918.0       0.0       0.0      11100.    7000.0     24.1      0.0
      39.0 -100000.0      21.0      85.0      18.7      21.3      25.9       2.5
     193.0  0.000106       8.0      13.0       0.0       4.0      26.6    2000.0
      0.03      1.40      0.05    5000.0     521.0      24.1      0.13      0.32
  800813.0    5826.0       0.0       0.0      10600.    7200.0     22.9      0.0
      32.0       6.0      31.0      81.0      17.9      21.3      25.5       1.1
     193.0  0.000120      -2.0      33.0       0.0       4.0      25.4    2300.0
      0.02      1.60      0.04    4900.0     504.0      22.9      0.14      0.31
  800813.0   11735.0       0.0       0.0      10300.    6600.0     22.7      0.0
      26.0       7.0      24.0      81.0      18.3      21.7      25.3       0.4
```

50 RECORDS AT END OF FILE

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800813.0   13849.0       0.0       0.0      10400.    7600.0     12.0      0.0
    34.0       6.0       5.0 -100000.0 -100000.0      21.2      21.4       1.3
   340.0  0.000037       1.0       5.0 -100000.0 -100000.0      13.9    2500.0
    0.03      1.50      0.06    5060.0     300.0      12.0      0.08      0.29
800813.0   14831.0       0.0       0.0       9700.    7200.0     12.9      0.0
    36.0       4.0      12.0      93.0      20.2      21.4      21.0       1.1
   283.0  0.000050       2.0      10.0 -100000.0 -100000.0      15.7    2600.0
    0.03      1.60      0.06    4640.0     295.0      12.9      0.08      0.33
800813.0   15813.0       0.0       0.0       9300.    7200.0     15.3      0.0
    35.0       4.0       7.0      90.0      19.6      21.3      20.6       1.2
   305.0  0.000075       5.0       2.0 -100000.0 -100000.0      18.9    2800.0
    0.03      1.60      0.06    4360.0     307.0      15.3      0.08      0.39
800813.0   20756.0       0.0       1.0       8800.    7000.0     17.9      0.0
    37.0       4.0      10.0      93.0      20.0      21.2      20.2       1.6
   312.0  0.000086       4.0       6.0 -100000.0 -100000.0      23.1    2900.0
    0.03      1.60      0.06    4080.0     315.0      17.9      0.08      0.47
800813.0   21739.0       0.0       1.0       8800.    6800.0     20.4      0.0
    39.0       4.0      16.0      92.0      19.9      21.2      19.8       1.8
   304.0  0.000112       2.0      14.0 -100000.0 -100000.0      26.3    2900.0
    0.03      1.60      0.06    3900.0     323.0      20.4      0.08      0.54
800813.0   23217.0       0.0       1.0       8800.    6600.0     26.7      0.0
    40.0       5.0       7.0      90.0      19.5      21.2      19.4       2.6
   294.0  0.000164      -1.0       8.0 -100000.0 -100000.0      38.9    3100.0
    0.03      1.50      0.06    3510.0     362.0      26.7      0.09      0.65
COMMENTS:
(1) THE UNIVERSITY OF MINNESOTA MOBILE LABORATORY (UMML) AND THE UNIVERSITY
    OF MINNESOTA MOBILE HOME (UMMH) WERE STATIONED AT 82 DEGREES 43'W
    LONGITUDE AND 40 DEGREES 14'N LATITUDE NEAR CROTON, OHIO.
(2) EACH DATA RECORD CORRESPONDS TO THE EAA BAG-FILL TIME.
(3) DATA OF MANY CONTINUOUS PARAMETERS AT EAA TIME ARE INCLUDED.
(4) THE FOLLOWING PARAMETERS ARE RELATED TO EAA AEROSOL SIZE
    DISTRIBUTION DATA:
    TEAA = EAA TEMPERATURE
    BSEA = BSCAT FORM EAA
    CODE1 AND CODE2 ARE CODES RELATED TO OUR ASSESSMENT OF THE QUALITY
    OF THE SIZE DISTRIBUTION DATA. THEY ARE DEFINED ON PAGE 17 OF THE
    UMINN PEPE/NEROS DATA REPORT TO EPA
    (UMINN PUBLICATION NO. 443).
    NT = TOTAL NUMBER CONCENTRATION, PARTICLES/CM**3
    VT = TOTAL VOLUME CONCENTRATION, MICRONS**3/CM**3
    DPNN = GEOMETRIC MEAN NUMBER DIAMETER OF NUCLEI MODE, MICRONS
    SGNN = GEOMETRIC STANDARD DEVIATION OF NUCLEI MODE
    NN = NUMBER IN THE NUCLEI MODE, PARTICLES/CM**3
    VN = VOLUME IN THE NUCLEI MODE, MICRONS**3/CM**3
    DPNA = GEOMETRIC MEAN NUMBER DIAMETER OF ACCUMULATION MODE, MICRONS
    NA = NUMBER IN THE ACCUMULATION MODE, PARTICLES/CM**3
    SA = SURFACE CONCENTRATION OF THE ACCUMULATION MODE, MICRONS**2/CM**3
    DPVA = GEOMETRIC MEAN VOLUME DIAMETER OF ACCUMULATION MODE, MICRONS
    SGVA = GEOMETRIC STANDARD DEVIATION OF ACCUMULATION MODE
    VA = VOLUME IN THE ACCUMULATION MODE, MICRONS**3/CM**3

TOTAL OF   430 RECORDS IN FILE UMPG.813
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 50 RECORDS AT BEGINNING OF FILE

20   2  16  UMSD.813    08/13/80      0. IREGULAR
PEPE/NEROS 1980             U. MINN   UMHL SIZE DISTRN (EAA/ROYCO) DATA
(2F10.0,6F10.1,/,2F10.1,6F10.3)
TIME      EAA1      EAA2      EAA3      EAA4      EAA5      EAA6      EAA7
EAA8      EAA9      EAA10     ROYCO1    ROYCO2    ROYCO3    ROYCO4    ROYCO5
HHMMSS.   DN        DN        DN        DN        DN        DN        DN
DN        DN        DN        DN        DN        DN        DN        DN
        96
   240000.        0.       0.0       0.0       0.0       0.1       0.1       0.2
       0.3       0.6     1.000     0.750     1.000     1.780     3.160     5.620
        0.        0.       0.0       0.0       0.0       0.0       0.1       0.1
       0.2       0.3     0.562     0.562     0.750     1.000     1.780     3.160
   231606.146000000.       0.0     533.0    3340.0       0.0     691.0    2750.0
    1240.0     197.0    43.200  1210.000     0.768     0.389     0.150     0.146
   233514.        0.     995.0     497.0    1450.0    1350.0    1730.0    2620.0
    1300.0     222.0    49.100    13.500     0.810     0.365     0.118     0.034
   234425.    45700.    8160.0     485.0     798.0    1480.0    1940.0    2590.0
    1320.0     170.0    61.900    13.400     0.792     0.385     0.083     0.054
      103.   600000.       0.0     867.0     514.0    1200.0    1790.0    2460.0
    1250.0     183.0    53.800    12.800     0.716     0.283     0.090     0.024
     2009.        0.   13100.0       6.4     867.0    1130.0    1380.0    2320.0
    1200.0     190.0    53.500    30.300     0.944     0.304     0.062     0.019
     3918.   698000.    9680.0      41.8     912.0    1020.0    1250.0    2280.0
    1250.0     193.0    55.900    30.800     0.931     0.248     0.087     0.039
     5826.        0.   11000.0     755.0     717.0     838.0    1240.0    2210.0
    1250.0     185.0    55.200    25.300     0.786     0.215     0.096     0.040
    11735.   951000.       0.0     297.0     838.0     771.0    1140.0    2110.0
    1210.0     197.0    63.400    24.600     0.648     0.201     0.093     0.034
    13648.        0.    9530.0       0.0     552.0    1590.0    1390.0    2350.0
    1290.0     175.0    44.600    30.300     1.170     0.445     0.121     0.044
    15553.   482000.       0.0       1.2     784.0     674.0     877.0    2010.0
    1030.0     140.0    26.200    12.400     0.689     0.296     0.112     0.064
    21503.    75000.       0.0     372.0     350.0     387.0     705.0    1340.0
     901.0     104.0    30.700     9.860     0.545     0.342     0.115     0.064
    23411.        0.    7660.0     306.0     168.0     540.0     880.0    2000.0
    1040.0     130.0    39.900    13.100     0.641     0.283     0.068     0.030
    25320.        0.       0.0     701.0      93.0     399.0     906.0    2060.0
    1090.0     134.0    40.500    14.100     0.652     0.276     0.109     0.019
    31233.    12300.       0.0     924.0     171.0     345.0     870.0    2060.0
     977.0     182.0    32.400    14.300     0.627     0.266     0.058     0.049
    33139.   626000.       0.0       0.0     213.0     495.0     735.0    1870.0
    1030.0     129.0    37.000    12.600     0.684     0.312     0.084     0.014
    35048.   257000.       0.0       0.0     194.0     466.0     686.0    1760.0
     996.0     126.0    36.400    14.800     0.652     0.220     0.052     0.034
    40957.        0.       0.0     141.0     196.0     379.0     704.0    1750.0
     984.0     115.0    34.200    13.500     0.535     0.237     0.071     0.024
    42907.        0.       0.0     560.0      19.1     292.0     777.0    1640.0
     981.0     119.0    34.000    13.500     0.520     0.205     0.052     0.035
    44818.        0.   10000.0       0.0     194.0     334.0     573.0    1680.0
     962.0     116.0    28.900    13.700     0.560     0.191     0.046     0.014

 50 RECORDS AT END OF FILE
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      504.0       89.4    23.900      9.200      0.560      0.235      0.084      0.014
      1656.         0.       0.0      778.0      478.0     1320.0     3220.0     1560.0
      537.0       67.7    24.800      9.390      0.580      0.232      0.081      0.014
      2632.         0.       0.0      164.0      457.0     1330.0     3000.0     1580.0
      511.0       94.7    24.600      9.120      0.516      0.202      0.056      0.040
      3609.         0.       0.0      634.0      593.0     1360.0     2950.0     1550.0
      482.0       93.3    21.600      9.050      0.491      0.212      0.087      0.030
      4546.         0.       0.0      186.0      532.0     1180.0     2890.0     1630.0
      557.0       97.1    26.200     10.300      0.602      0.261      0.099      0.030
      5524.         0.       0.0      616.0      661.0     1410.0     2690.0     1490.0
      458.0       72.7    21.300      9.150      0.595      0.233      0.087      0.024
     10502.         0.       0.0      333.0      721.0     1340.0     2620.0     1710.0
      457.0       83.6    25.400      9.520      0.494      0.284      0.065      0.035
     11440.         0.       0.0       46.2      480.0     1200.0     2730.0     1800.0
      508.0       81.5    27.900     10.100      0.533      0.235      0.093      0.045
     12909.         0.       0.0        2.9      393.0     1310.0     2910.0     2050.0
      587.0       81.7    29.800     14.300      0.790      0.210      0.071      0.030
     13849.         0.       0.0      311.0      847.0     1380.0     2720.0     1730.0
      535.0       55.9    27.200     19.900      1.370      0.399      0.115      0.014
     14831.   244000.       0.0      489.0      811.0     1250.0     2390.0     1670.0
      501.0       52.5    30.800     27.700      2.300      0.493      0.131      0.030
     15813.    25000.       0.0      649.0      868.0     1300.0     2190.0     1590.0
      476.0       55.1    31.000     41.200      4.290      0.942      0.175      0.030
     20756.         0.    4820.0      613.0     1020.0     1240.0     2030.0     1510.0
      451.0       34.3    37.300     58.100      7.990      1.840      0.184      0.040
     21739.         0.       0.0      626.0     1020.0     1260.0     2020.0     1350.0
      432.0       19.5    39.400     72.700     11.900      2.720      0.221      0.025
     23217.         0.       0.0      584.0     1300.0     1250.0     1680.0     1280.0
      409.0       15.2    40.700     97.300     21.500      6.990      0.326      0.030
 COMMENTS:

 (1) THE UNIVERSITY OF MINNESOTA MOBILE LABORATORY (UMML) AND THE UNIVERSITY
     OF MINNESOTA MOBILE HOME (UMMH) WERE STATIONED AT 82 DEGREES 43'W
     LONGITUDE AND 40 DEGREES 14'N LATITUDE NEAR CROTON, OHIO.
 (2) THIS FILE CONTAINS THE ACTUAL EAA AND ROYCO DATA NUMBERS. THE SIZE
     RANGE BOUNDARIES ARE AS FOLLOWS:

     EAA1 :     .0032 -  .0056 MICRON
     EAA2 :     .0056 -  .01   MICRON
     EAA3 :     .01   -  .018  MICRON
     EAA4 :     .018  -  .032  MICRON
     EAA5 :     .032  -  .056  MICRON
     EAA6 :     .056  -  .1    MICRON
     EAA7 :     .1    -  .178  MICRON
     EAA8 :     .178  -  .316  MICRON
     EAA9 :     .316  -  .562  MICRON
     ROYCO 1 + 2  .562  -  1   MICRON
     ROYCO 3    1      -  1.78 MICRON
     ROYCO 4    1.78   -  3.16 MICRON
     ROYCO 5    3.16   -  5.62 MICRON

TOTAL OF    225 RECORDS IN FILE UMSD.813
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 38 RECORDS AT END OF FILE

20   1   8  MUDD.813      8/13/80      1. HOURS
PEPE/NEROS 1980              H. MUDD   SPECIAL PHOTOCHEMISTRY LAB DATA
(8F10.1)
DATE       TIME       UV-RAD     SOL-RAD    HCHO       H2O2       NO         NO2
YYMMDD     HHMM       W/M**2     W/M**2     PPBV       PPBV       PPBV       PPBV
        24
  800831.0    2300.0     110.0      77.5      25.0       5.0      50.0      50.0
  800701.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0
  800813.0       0.0       0.0       0.0       0.0       0.0       1.4       0.2
  800813.0     100.0       0.0       0.0       0.0       0.0       0.5       0.2
  800813.0     200.0       0.0       0.0       0.0       0.0       0.0       0.1
  800813.0     300.0       0.0       0.0       0.0       0.0       0.0       0.1
  800813.0     400.0       0.0       0.0       0.0       0.0      14.4       0.0
  800813.0     500.0       0.0       0.0       0.0       0.0      33.5       3.6
  800813.0     600.0       0.0       0.0       0.0       0.0      37.4       2.6
  800813.0     700.0       0.0       0.0       0.0       0.0      44.8       5.3
  800813.0     800.0       0.0       0.0       0.0       0.0      58.8       7.3
  800813.0     900.0       0.0       0.0       0.0       0.0      47.9       3.9
  800813.0    1000.0       0.0       0.0       0.0       0.0       5.8       1.3
  800813.0    1100.0       0.0       0.0       0.0       0.0       3.7       0.7
  800813.0    1200.0       0.0       0.0      27.7       0.0       1.9       1.0
  800813.0    1300.0       0.0       0.0      17.7       0.0       0.0       0.0
  800813.0    1400.0       0.0       0.0      15.6       0.0       0.0       0.0
  800813.0    1500.0       0.0       0.0      28.8       0.0       0.9       2.9
  800813.0    1600.0       0.0       0.0       0.0       0.0       0.8       2.0
  800813.0    1700.0       0.0       0.0       0.0       0.0       0.1       2.4
  800813.0    1800.0       0.0       0.0       0.0       0.0       0.2       3.0
  800813.0    1900.0       0.0       0.0       0.0       0.0       0.0       0.0
  800813.0    2000.0       0.0       0.0       0.0       0.0       0.0       0.0
  800813.0    2100.0       0.0       0.0       0.0       0.0       0.0       0.0
  800813.0    2200.0       0.0       0.0       0.0       0.0       0.6      17.8
  800813.0    2300.0       0.0       0.0       0.0       0.0       0.4      16.3
HOURLY-AVERAGE DATA OF SPECIAL PHOTOCHEMISTRY MEASUREMENTS BY HARVEY
MUDD COLLEGE.
RADIATION, FORMALDEHYDE AND HYDROGEN PEROXIDE MEASUREMENTS AT WCVO
SITE IN NEW ALBANY, OH (NE OF COLUMBUS).
NO/NO2 MEASUREMENTS (BASED ON A PROTOTYPE HIGH SENSITIVITY NOX MONITOR)
AT W. JEFFERSON SITE (W OF COLUMBUS).


TOTAL OF    38 RECORDS IN FILE MUDD.813
```

```
 39 RECORDS AT END OF FILE

20   1  11  SP4G01.813  08/13/80      0. IREGULAR
PEPE/NEROS 1980               NASA-GSFC 4-CH. SUN-PHOTOMETER
(F6.0,F5.0,F5.1,8F8.3)
TIME      PNO       TEMP      BLCOR     GNCOR     RDCOR     WACOR     BLTBD
GNTBD     RDTBD     VZ
EDT                 DEG C
                    CM
        15
 1209. 323. 35.1  18.900 118.400 149.100  79.600   0.349   0.322   0.457   9.869
  933. 308. 22.6   2.900  26.900  12.900   2.100   0.136   0.099   0.035   3.640
 1128. 308. 26.1  13.800 110.300 149.100  58.500   0.136   0.099   0.035   4.175
  935. 310. 31.6   6.400  52.900 106.100  58.300   0.266   0.190   0.082   3.672
  952. 310. 33.4   7.400  56.900 107.400  60.600   0.259   0.189   0.085   3.793
 1013. 310. 33.6   8.700  62.700 110.300  65.400   0.248   0.180   0.083   3.789
 1047. 310. 34.8  11.200  74.600 115.200  73.400   0.209   0.148   0.077   3.726
 1055. 310. 34.8  12.000  76.900 116.400  76.200   0.194   0.141   0.075   3.640
 1103. 310. 34.9  12.200  77.500 116.100  74.900   0.195   0.142   0.077   3.791
 1111. 310. 35.1  12.700  79.000 116.800  76.700   0.189   0.139   0.076   3.747
 1015. 311. 24.4  15.200 113.800 116.300  70.600   0.190   0.125   0.050   3.845
 1209. 311. 25.0  18.900 118.400 116.200  79.600   0.240   0.176   0.070   4.275
  948. 315. 24.0   7.000  77.100 136.000  50.000   0.248   0.169   0.067   4.436
 1030. 315. 24.7   7.700  77.000 133.200  56.100   0.304   0.213   0.087   4.383
 1206. 315. 24.8   9.700  80.200 133.900  59.000   0.349   0.271   0.110   5.173
  933. 318. 24.2   9.900  81.800 131.900  50.600   0.202   0.133   0.052   3.831
  935. 323. 22.6   2.900  26.900  12.900   2.100   0.334   0.322   0.457   9.869
 4-CHANNEL SUNPHOTOMETER MEASUREMENTS OF ATMOSPHERIC TURBIDITY
 TURBIDIY MEASUREMENTS FOR BLUE(BLTBD), GREEN(GNTBD) AND RED(RDTBD) CHANNELS;
    PRECIPITABLE WATER VAPOR(VZ) FOR WATER CHANNEL
 TEMP=TEMP OF DETECTOR; BLCOR, GNCOR, RDCOR AND WACOR=CORRECTED SUNPHOTOMETER
    READINGS OF BLUE, GREEN, RED AND WATER CHANNELS, RESPECTIVELY
 MEASUREMENTS MADE AT SEVERAL LOCATIONS (PNO=PHOTO. NO.)
 PHOTO.                                                     LATITUDE LONGITUDE
  NO.    LOCATION                                            DEG  MIN  DEG MIN
  308    WOODS HOLE, MA                                      41   30N  70  40W
  310    GODDARD SPACE FLIGHT CTR., GREENBELT, MD            39   01N  76  50W
  311    MOBILE RADAR, COLUMBUS, OH                          39   56N  83  00W
  315    COLUMBUS, OH                                        39   56N  83  00W
  318    MOVING LAB, COLUMBUS, OH                            39   56N  83  00W
  323    GOVERNOR'S STATE UNIV., CHICAGO, IL                 41   25N  87  43W

TOTAL OF    39 RECORDS IN FILE SP4G01.813
```

```
 36 RECORDS AT END OF FILE

20    1    6  ARL01.813   08/13/80      0. IREGULAR
PEPE/NEROS 1980                NOAA-ARL  SMALL TETROON DATA
(F10.0,5F10.4,20X)
TIME       LAT        LONG       RADALT     WS         WD
HHMMSS     DEG        DEG        MMSL       M/SEC      DEG
        23
    82615.    40.0823    83.0054 3136.8000   11.0613  303.5010
    81515.    40.0760    82.9596  275.8440    0.0000    0.0000
    81515.    40.0794    83.0042  275.8440    0.0000    0.0000
    81545.    40.0797    83.0046  349.2770    1.5051  131.6850
    81615.    40.0802    83.0051  504.3930    2.3511  140.3050
    81645.    40.0805    83.0054  634.8030    1.5270  157.0290
    81715.    40.0809    83.0053  765.3030    1.2295  190.1060
    81745.    40.0814    83.0043  897.4220    3.3608  236.6730
    81815.    40.0817    83.0025 1026.9399    5.3070  255.6430
    81845.    40.0819    83.0006 1154.8199    5.3808  263.6460
    81915.    40.0820    82.9986 1282.3400    5.7731  265.9390
    81945.    40.0821    82.9966 1421.0900    5.6403  265.1480
    82015.    40.0821    82.9942 1555.6300    6.8326  271.0200
    82045.    40.0820    82.9911 1706.4100    8.7678  271.2400
    82115.    40.0821    82.9874 1846.8400   10.4322  268.5510
    82145.    40.0823    82.9835 1976.8700   11.0613  266.9190
    82215.    40.0818    82.9803 2103.5400    9.3777  279.5300
    82245.    40.0815    82.9775 2228.2500    7.8319  279.1660
    82315.    40.0812    82.9753 2354.2400    6.5646  279.9710
    82345.    40.0807    82.9730 2482.1599    6.6843  286.7030
    82415.    40.0802    82.9705 2624.5400    7.1733  282.6280
    82445.    40.0794    82.9682 2749.3999    7.3774  295.1560
    82515.    40.0787    82.9655 2883.6899    7.9831  288.1360
    82545.    40.0775    82.9624 3003.2600    9.8795  298.5610
    82615.    40.0760    82.9596 3136.8000    9.5882  303.5010
  RABAL FLIGHT 316 RELEASED AT  8:15:15 CDT FROM OSU AIRPORT
 TETROON FLIGHTS NUMBERED LESS THAN 99 WERE TRACKED BY ONE CREW, AND FLIGHTS
 NUMBERED 2XX (200-299) WERE TRACKED BY ANOTHER CREW.
 WIND DATA ARE INFERRED FROM TETROON TRAJECTORY. RABAL (PILOT BALLOON TRACKED
 BY RADAR) FLIGHTS ARE NUMBERED 3XX (300-316).


TOTAL OF    36 RECORDS IN FILE ARL01.813
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```
 50 RECORDS AT BEGINNING OF FILE

20    1    8  EPAO.813     08/13/80     15. MINUTES
PEPE/NEROS 1980                 EPA/SRI   LARGE TETROON DATA
(3F10.0,2F10.3,3F10.0)
DATE      TIME-GMT  TRANS-ID  NAS-X     NAS-Y     LATITUDE  LONGITUD  ALTITUDE
YYMMDD    HHMM                ?         ?         DDMMSS    DDMMSS    FEET
        49
   800815.     2400.     1699.  1000.000  1000.000       90.       90.    10000.
   800715.        0.     1600.     0.000     0.000        0.        0.        0.
   800813.     1219.     1654.   337.000   283.750   395447.   830753.     2300.
   800813.     1228.     1654.   338.250   283.875   395454.   830616.        0.
   800813.     1244.     1654.   340.750   284.125   395508.   830301.        0.
   800813.     1259.     1654.   343.750   284.500   395530.   825907.        0.
   800813.     1314.     1654.   346.875   284.625   395536.   825502.        0.
   800813.     1329.     1654.   349.250   284.750   395543.   825157.     4300.
   800813.     1344.     1654.   352.625   285.125   395603.   824734.     4600.
   800813.     1429.     1654.   359.500   286.500   395722.   823836.        0.
   800813.     1445.     1654.   362.125   286.500   395720.   823511.        0.
   800813.     1454.     1654.   363.875   286.250   395704.   823255.        0.
   800813.     1415.     1654.   355.875   153.125   395638.   824143.     5100.
   800813.     1430.     1654.   358.125   153.625   395711.   823849.     5400.
   800813.     1445.     1654.   360.875   153.500   395708.   823514.     5400.
   800813.     1500.     1654.   363.375   153.375   395704.   823158.     5200.
   800813.     1515.     1654.   366.000   152.750   395631.   822832.        0.
   800813.     1530.     1654.   369.000   152.500   395620.   822438.     5455.
   800813.     1545.     1654.   371.000   152.375   395615.   822202.        0.
   800813.     1600.     1654.   373.625   152.000   395556.   821836.     6281.
   800813.     1615.     1654.   376.125   151.875   395552.   821521.     4800.
   800813.     1635.     1654.   378.250   152.375   395625.   821236.        0.
   800813.     1645.     1654.   380.375   152.250   395619.   820950.     4600.
   800813.     1700.     1654.   381.500   152.625   395643.   820823.        0.
   800813.     1715.     1654.   383.500   153.000   395708.   820547.        0.
   800813.     1731.     1654.   385.750   153.750   395756.   820253.     5300.
   800813.     1801.     1654.   389.250   155.625   395952.   815823.        0.
   800813.     1816.     1654.   390.625   157.625   400154.   815638.        0.
   800813.     1831.     1654.   392.125   159.875   400411.   815444.        0.
   800813.     1846.     1654.   393.625   162.250   400635.   815250.        0.
   800813.     1901.     1654.   395.125   164.375   400844.   815055.        0.
   800813.     1916.     1654.   396.625   166.125   401031.   814900.        0.
   800813.     1926.     1654.   397.500   168.250   401239.   814754.        0.
   800813.     2001.     1654.   402.000   176.125   402036.   814211.        0.
   800813.     2016.     1654.   404.125   179.750   402416.   813928.        0.
   800813.     2031.     1654.   406.375   183.500   402803.   813635.        0.
   800813.     2046.     1654.   408.750   187.125   403143.   813332.        0.
   800813.     2101.     1654.   411.250   191.125   403545.   813020.        0.
   800813.     2116.     1654.   413.875   194.625   403917.   812656.        0.
   800813.     2131.     1654.   417.250   197.625   404220.   812233.        0.
   800813.     2147.     1654.   420.500   200.375   404507.   811819.        0.
   800813.     2201.     1654.   423.125   203.500   404817.   811453.        0.
   800813.     2217.     1654.   426.000   207.875   405241.   811110.        0.
   800813.     2232.     1654.   428.750   212.125   405658.   810735.        0.

14 RECORDS AT END OF FILE
```

```
   800813.     2246.     1654.   431.750   216.125   410059.   810340.          0.
   800813.     2302.     1654.   435.250   220.500   410524.   805904.          0.
   800813.     2317.     1654.   439.000   224.500   410926.   805408.          0.
   800813.     2332.     1654.   442.750   228.375   411320.   804912.          0.
   800813.     2347.     1654.   447.000   232.250   411714.   804335.          0.
   800814.        2.     1654.   450.375   236.750   412145.   803907.          0.
   800814.       32.     1654.   452.750   246.500   413131.   803559.          0.
COMMENTS:

(1) OBSERVE THAT TIMES ARE GMT.
(2) TRANS-ID = TRANSPONDER NUMBER; IDENTIFIES THIS PARTICULAR TETROON.
(3) NAS-(X,Y) = POSITION COORDINATES IN THE NATIONAL AVIATION COORDINATE
    SYSTEM.  CORRESPONDING POSITION IN LAT/LONG IS ALSO INCLUDED IN EACH
    RECORD.


TOTAL OF    64 RECORDS IN FILE EPAO.813
```

```
 50 RECORDS AT BEGINNING OF FILE

FORMAT: STATE-VS
PHYSICAL RECORD: 80 BYTES    LOGICAL RECORD: 80 BYTES
PROJECT: PROJECT STATE PEPE/NEROS STUDY
ORGANIZATION: NASA/LARC
TYPE OF DATA: CESSNA CORRELATIVE DATA
FILENAME: CORAVS.813    DATE OF DATA COLLECTION: 08/13/80
DELTA T:    VALUE =  0    UNITS CODE = 0
NO. OF PARAMETERS PER RECORD:   5
DATA RECORD FORMAT: (5E13.6,15X)
PARAMETER NAMES
ALTITUDE  OZONE     STD.DEV.  B(SCAT)   STD.DEV.
PARAMETER UNITS
MMSL      PPB       PPB       M-1       M-1
DATA MINIMA
 0.730000E+03 0.360000E+02 0.200000E+01 0.230000E-04 0.300000E-05
DATA MAXIMA
 0.236900E+04 0.660000E+02 0.700000E+01 0.185000E-03 0.106000E-03
PLOT MINIMA
 0.000000E+00 0.000000E+00 0.000000E+00 0.000000E+00 0.000000E+00
PLOT MAXIMA
 0.341000E+04 0.130000E+03 0.270000E+02 0.520000E-03 0.950000E-04
NO. OF SUBFILES:    3
&&END OF MAIN HEADER
SUBFILE  1
LOCATION OF OBSERVATION
                   NAME: SEE COMMENTS FOR LOCATION AND TIME INFORMATION
       INITIAL POSITION:  0.0000000E+00   0.0000000E+00   0.0000000E+00
         FINAL POSITION:  0.0000000E+00   0.0000000E+00   0.0000000E+00
TIME OF OBSERVATION
                   DATE: 08/13/80
                   TIME:      0
NO. OF SUBFILE DATA RECORDS:          12
 0.730000E+03 0.650000E+02 0.200000E+01 0.185000E-03 0.300000E-05
 0.868000E+03 0.660000E+02 0.300000E+01 0.166000E-03 0.130000E-04
 0.977000E+03 0.640000E+02 0.400000E+01 0.146000E-03 0.210000E-04
 0.114000E+04 0.660000E+02 0.500000E+01 0.139000E-03 0.170000E-04
 0.129300E+04 0.650000E+02 0.300000E+01 0.133000E-03 0.170000E-04
 0.144800E+04 0.640000E+02 0.400000E+01 0.125000E-03 0.150000E-04
 0.159800E+04 0.630000E+02 0.400000E+01 0.119000E-03 0.280000E-04
 0.174700E+04 0.620000E+02 0.300000E+01 0.102000E-03 0.300000E-04
 0.190100E+04 0.550000E+02 0.600000E+01 0.900000E-04 0.370000E-04
 0.206100E+04 0.510000E+02 0.700000E+01 0.620000E-04 0.400000E-04
 0.221500E+04 0.420000E+02 0.500000E+01 0.230000E-04 0.140000E-04
 0.236900E+04 0.360000E+02 0.200000E+01 0.780000E-04 0.106000E-03
OTHER INFORMATION RELEVANT TO SUBFILE  1
STUNAS23-MAR-82
04/27/81


 10


 50 RECORDS AT END OF FILE
```

```
NO. OF SUBFILE DATA RECORDS:          14
 0.596000E+03 0.860000E+02 0.100000E+01 0.264000E-03 0.700000E-05
 0.700000E+03 0.880000E+02 0.200000E+01 0.257000E-03 0.700000E-05
 0.839000E+03 0.870000E+02 0.200000E+01 0.259000E-03 0.500000E-05
 0.997000E+03 0.870000E+02 0.300000E+01 0.255000E-03 0.600000E-05
 0.115400E+04 0.870000E+02 0.200000E+01 0.249000E-03 0.700000E-05
 0.129800E+04 0.870000E+02 0.400000E+01 0.244000E-03 0.800000E-05
 0.145200E+04 0.850000E+02 0.500000E+01 0.235000E-03 0.170000E-04
 0.160400E+04 0.790000E+02 0.400000E+01 0.200000E-03 0.130000E-04
 0.174000E+04 0.730000E+02 0.300000E+01 0.179000E-03 0.100000E-04
 0.191400E+04 0.740000E+02 0.400000E+01 0.148000E-03 0.100000E-04
 0.205300E+04 0.660000E+02 0.100000E+02 0.114000E-03 0.420000E-04
 0.221100E+04 0.500000E+02 0.120000E+02 0.440000E-04 0.240000E-04
 0.236100E+04 0.400000E+02 0.800000E+01 0.220000E-04 0.500000E-05
 0.245600E+04 0.350000E+02 0.300000E+01 0.170000E-04 0.200000E-05
OTHER INFORMATION RELEVANT TO SUBFILE  3
STUNAS23-MAR-82
04/27/81


  6


CESSNA CORRELATIVE DATA


LOCATION: ROSEWOOD VOR 137 DEG 4
7 NAUTICAL MILES

LAT= 39 DEG 43 MIN N, LONG 83 DE
G 38 MIN W

TIME= 1652 TO 1717 EDT


DATA INCLUDES TWO SPIRALS


SPECIAL NOTES: NONE


QA* 23-MAR-82 08:25:40  STUNAS

Data checked for conformity to r
ange spcifications
QA. No errors found.
@@END OF SUBFILE  3
&&
FILE CREATION DATE: 02-AUG-83    CREATING PROGRAM: STVSNL


TOTAL OF   211 RECORDS IN FILE CORAVS.813
```

50 RECORDS AT BEGINNING OF FILE

```
FORMAT: STATE-VS
PHYSICAL RECORD: 80 BYTES    LOGICAL RECORD: 80 BYTES
PROJECT: PROJECT/STUDY:  PEPE/NEROS
ORGANIZATION: NASA/LARC
TYPE OF DATA: CESSNA CORRELATIVE WITH UV-DIAL (TEMPERATURE)
FILENAME: CRTAVS.813    DATE OF DATA COLLECTION: 08/13/80
DELTA T:     VALUE =  0    UNITS CODE = 0
NO. OF PARAMETERS PER RECORD:    3
DATA RECORD FORMAT: (3E13.6,41X)
PARAMETER NAMES
ALTITUDE  TEMP        DEW-PT
PARAMETER UNITS
MMSL      DEG C       DEG C
DATA MINIMA
 0.911000E+03 0.126000E+02-0.105000E+02
DATA MAXIMA
 0.242800E+04 0.208000E+02 0.143000E+02
PLOT MINIMA
 0.000000E+00 0.600000E+01-0.100000E+06
PLOT MAXIMA
 0.103937E+01 0.303800E+03 0.102500E+03
NO. OF SUBFILES:    2
&&END OF MAIN HEADER
SUBFILE  1
LOCATION OF OBSERVATION
                   NAME: SEE COMMENTS FOR LOCATION AND TIME INFORMATION
       INITIAL POSITION:  0.0000000E+00   0.0000000E+00   0.0000000E+00
         FINAL POSITION:  0.0000000E+00   0.0000000E+00   0.0000000E+00
TIME OF OBSERVATION
                   DATE: 08/13/80
                   TIME:      0
NO. OF SUBFILE DATA RECORDS:         31
 0.911000E+03 0.208000E+02 0.143000E+02
 0.915000E+03 0.206000E+02 0.140000E+02
 0.928000E+03 0.207000E+02 0.127000E+02
 0.960000E+03 0.204000E+02 0.120000E+02
 0.102000E+04 0.197000E+02 0.122000E+02
 0.106100E+04 0.193000E+02 0.124000E+02
 0.111000E+04 0.188000E+02 0.131000E+02
 0.114200E+04 0.186000E+02 0.120000E+02
 0.116200E+04 0.184000E+02 0.131000E+02
 0.126100E+04 0.175000E+02 0.103000E+02
 0.130900E+04 0.170000E+02 0.950000E+01
 0.137400E+04 0.162000E+02 0.101000E+02
 0.142500E+04 0.159000E+02 0.970000E+01
 0.145800E+04 0.156000E+02 0.970000E+01
 0.154400E+04 0.150000E+02 0.800000E+01
 0.157500E+04 0.147000E+02 0.900000E+01
 0.163700E+04 0.143000E+02 0.740000E+01
 0.168400E+04 0.140000E+02 0.660000E+01
```

50 RECORDS AT END OF FILE

```
 0.192700E+04 0.142000E+02 0.700000E+01
 0.201800E+04 0.134000E+02 0.580000E+01
 0.206200E+04 0.135000E+02 0.510000E+01
 0.214900E+04 0.127000E+02 0.400000E+01
 0.220100E+04 0.123000E+02 0.480000E+01
 0.226500E+04 0.119000E+02 0.390000E+01
 0.231800E+04 0.122000E+02 0.110000E+01
 0.238800E+04 0.129000E+02 0.000000E+00
 0.244900E+04 0.138000E+02 0.000000E+00
 0.246500E+04 0.137000E+02 0.000000E+00
 0.246600E+04 0.136000E+02 0.000000E+00
OTHER INFORMATION RELEVANT TO SUBFILE  2
STUNAS10-JUN-82
04/27/81


  6


CESSNA CORRELATIVE TEMPERATURE D
ATA

LOCATION=ROSEWOOD VOR 137 DEG/67
 NAUTICAL MILES

LAT= 39 DEG 28 MIN N, LONG 83 DE
G 28 MIN W

TIME=1633 TO 1646 EDT


SPECIAL NOTES: DATA APPLIES TO O
ZONE AND B(SCAT) FILES CORA02 AN
D
               CORA03 8/13/80


QA* 10-JUN-82 15:58:24  STUNAS

Data checked for conformity to r
ange spcifications
  1 channels with out of range d
ata    %
Range header records have been c
hanged to reflect actual values
QA. See documentation.
@@END OF SUBFILE  2
&&
FILE CREATION DATE: 02-AUG-83    CREATING PROGRAM: STVSNL


TOTAL OF   180 RECORDS IN FILE CRTAVS.813
```

```
 50 RECORDS AT BEGINNING OF FILE

FORMAT: STATE-VS
PHYSICAL RECORD: 80 BYTES    LOGICAL RECORD: 80 BYTES
PROJECT: PROJECT/STUDY:  PEPE/NEROS
ORGANIZATION: AEROVIRONMENT
TYPE OF DATA: PIBAL DATA FOR SODAR - 1
FILENAME: AVPI01.813    DATE OF DATA COLLECTION:  8/13/80
DELTA T:    VALUE = 0    UNITS CODE = 0
NO. OF PARAMETERS PER RECORD:   3
DATA RECORD FORMAT: (3F10.1,50X)
PARAMETER NAMES
ALT       WS        WD
PARAMETER UNITS
M AGL     MS-1      DEG T
DATA MINIMA
       0.0       0.0       0.0
DATA MAXIMA
    5000.0      25.0     360.0
PLOT MINIMA
      -0.1       0.0      -1.0
PLOT MAXIMA
    5001.0      25.0     361.0
NO. OF SUBFILES:    1
&&END OF MAIN HEADER
SUBFILE  1
LOCATION OF OBSERVATION
                   NAME:
       INITIAL POSITION:  0.4004000E+06   0.8303100E+06   0.9999900E+05
         FINAL POSITION:  0.4004000E+06   0.8303100E+06   0.9999900E+05
TIME OF OBSERVATION
                   DATE:  8/13/80
                   TIME: 183130
NO. OF SUBFILE DATA RECORDS:         29
     115.3       4.2     197.0
     231.3       4.7     199.0
     347.2       5.6     202.0
     455.3       5.6     208.0
     560.9       4.6     213.0
     654.5       4.3     212.0
     740.8       4.6     204.0
     823.3       5.0     195.0
     902.4       4.8     192.0
     984.8       4.5     196.0
    1073.1       3.8     203.0
    1156.7       3.1     203.0
    1231.7       2.8     192.0
    1294.9       3.1     195.0
    1346.4       3.9     203.0
    1400.2       3.9     205.0
    1458.2       3.3     211.0
    1517.4       3.0     213.0

 14 RECORDS AT END OF FILE
```

```
    1577.9       3.3      212.0
    1635.8       4.1      212.0
    1689.7       4.2      216.0
    1744.1       3.9      240.0
    1795.0       4.9      266.0
    1844.1       5.5      277.0
    1891.8       5.6      281.0
    1940.7       5.4      282.0
    1996.7       5.6      281.0
    2057.3       7.1      290.0
    2122.6       8.8      297.0
OTHER INFORMATION RELEVANT TO SUBFILE  1
&&
FILE CREATION DATE: 09-AUG-83    CREATING PROGRAM: STVSPI


TOTAL OF    64 RECORDS IN FILE AVPI01.813
```

```
 50 RECORDS AT BEGINNING OF FILE

FORMAT: STATE-VS
PHYSICAL RECORD: 80 BYTES    LOGICAL RECORD: 80 BYTES
PROJECT: PROJECT/STUDY:  PEPE/NEROS
ORGANIZATION: AEROVIRONMENT
TYPE OF DATA: AIRSONDE DATA FOR SODAR - 1
FILENAME: AVAS01.813    DATE OF DATA COLLECTION:  8/13/80
DELTA T:    VALUE =  0    UNITS CODE = 0
NO. OF PARAMETERS PER RECORD:   3
DATA RECORD FORMAT: (3F10.1,50X)
PARAMETER NAMES
ALT       WS        WD
PARAMETER UNITS
M AGL     MS-1      DEG T
DATA MINIMA
       0.0     -20.0       0.0
DATA MAXIMA
    5000.0      50.0     100.0
PLOT MINIMA
      -0.1     -10.0      -1.0
PLOT MAXIMA
    5001.0      45.0     101.0
NO. OF SUBFILES:    1
&&END OF MAIN HEADER
SUBFILE  1
LOCATION OF OBSERVATION
                   NAME:
       INITIAL POSITION:  0.4004000E+06   0.8303100E+06   0.9999900E+05
         FINAL POSITION:  0.4004000E+06   0.8303100E+06   0.9999900E+05
TIME OF OBSERVATION
                   DATE:  8/13/80
                   TIME: 183122
NO. OF SUBFILE DATA RECORDS:         70
      82.9      27.2      52.0
     189.1      26.3      53.0
     290.7      25.4      54.0
     401.7      24.5      56.0
     500.4      23.7      59.0
     583.9      22.9      62.0
     670.8      22.1      65.0
     752.5      21.3      66.0
     821.2      20.7      67.0
     889.3      20.0      70.0
     961.7      19.2      73.0
    1036.5      18.5      75.0
    1125.7      17.7      79.0
    1207.6      16.8      83.0
    1268.8      16.0      85.0
    1312.2      15.7      83.0
    1355.7      15.2      85.0
    1399.3      14.9      83.0

 50 RECORDS AT END OF FILE
```

```
    1721.8       14.1       49.0
    1813.8       14.6       18.0
    1856.5       15.5       15.0
    1899.4       15.5       15.0
    1942.5       15.3       15.0
    1987.9       14.6       15.0
    2044.3       14.6       15.0
    2110.1       14.2       19.0
    2168.5       13.9       22.0
    2236.2       13.3       24.0
    2296.4       12.8       26.0
    2360.3       12.2       29.0
    2421.2       11.7       31.0
    2481.2       11.2       32.0
    2539.4       10.8       33.0
    2594.4       10.4       34.0
    2648.6       10.1       38.0
    2699.6        9.7       48.0
    2750.9        9.3       55.0
    2803.6        9.3       55.0
    2860.2        9.3       50.0
    2921.9        8.9       54.0
    2985.2        8.5       59.0
    3047.7        8.1       61.0
    3117.9        7.7       61.0
    3186.1        7.4       58.0
    3259.7        7.1       58.0
    3331.5        6.6       59.0
    3392.5        6.1       60.0
    3457.6        5.6       61.0
    3518.0        5.1       64.0
    3578.8        4.7       62.0
    3638.6        4.2       62.0
    3707.8        3.7       63.0
    3765.8        3.2       64.0
    3834.5        2.6       66.0
    3891.9        2.0       69.0
    3953.5        1.6       69.0
    4008.9        1.0       67.0
    4077.8        0.6       67.0
    4136.5        0.2       66.0
    4194.2       -0.4       69.0
    4249.5       -1.0       75.0
    4314.6       -1.5       80.0
    4371.9       -1.7       78.0
    4430.9       -1.8       73.0
    4480.6       -2.2       71.0
OTHER INFORMATION RELEVANT TO SUBFILE  1
&&
FILE CREATION DATE: 09-AUG-83    CREATING PROGRAM: STVSAS


TOTAL OF   105 RECORDS IN FILE AVAS01.813
```

```
 50 RECORDS AT BEGINNING OF FILE

AUG198013 0   4   68W
72425 3837   8255  246  23916
  246 20  30
  305 15  30
  610350  41
  914330  36
 1219315  41
 1535300  51
 1829285  67
 2134280  82
 2438280  87
 2743290  97
 3152300 113
 3353300 118
 3658300 128
 4267295 123
 4877295 144
 5870310 180
72429 3987   8412  298  20016
  298330  15
  305330  15
  610330  51
  914320  46
 1219305  61
 1533295  77
 1829295  92
 2134280  97
 2438285  97
 2743300  82
 3146300  92
 3658295 128
 4267300 154
 4877300 201
 5486300 237
 5850295 247
72520 4053   8023  359  29815
  359270  30
  610295  72
  914310  72
 1219320  72
 1521315  72
 1829305  82
 2134295 103
 2438285  92
 2743280  82
 3048295 128
 3127295 123
 3658295 139
 4267290 134
 4877290 134


 50 RECORDS AT END OF FILE
```

```
  5791285 149
  5890280 149
72429 3987   8412  298  20018
   298260  25
   305260  25
   610250  51
   914255  51
  1219260  56
  1524265  51
  1548265  51
  1829270  46
  2134280  46
  2438295  51
  2743310  61
  3048315  72
  3169315  82
  3353315  82
  3658310  87
  4267295 139
  4877275 149
  5870275 195
72520 4053   8023  359  29814
   359290  15
   610295  20
   914295  20
  1219315  20
  1548305  36
  1829300  51
  2134295  72
  2438290  87
  2743300  92
  3156300  92
  3658300 118
  4267290 170
  4877280 154
  5860280 154
72637 4297   8373  236  20013
   236230  41
   305230  46
   610235  56
   914235  56
  1219230  61
  1829250  67
  2134260  61
  2438265  72
  2743270  87
  3048275 118
  3658270 134
  4267265 144
  4877265 175
```

TOTAL OF   249 RECORDS IN FILE UAWIND.813

50 RECORDS AT BEGINNING OF FILE

```
AUG198013 0   4   48T
72425 3837   8255  246  239 8
 246 987030102910
 254 986030002850
1535 850028722853
1709 833028642816
2388 768028162756
2606 748028142514
3152 700028322532
5870 500026712371
72429 3987   8412  298  200 9
 298 981029842914
1221 882028982868
1533 850028702839
2118 793028322794
2492 758028142644
3146 700028082508
4207 615027742474
5161 546026952395
5850 500026712371
72520 4053   8023  359  29815
 359 973029482898
 576 949029462876
1090 894028942854
1282 874028802831
1521 850028622824
1768 825028402829
2602 746027862784
2734 734027722770
2812 727027662676
2846 724027742474
2925 717028082508
3127 700028002500
3815 643027682468
5108 547026872387
5810 500026332333
72637 4297   8373  236  20011
 236 988029542874
 359 974029362836
1026 901028742834
1517 850028362746
1904 811028062776
2173 785028082658
2704 736028102510
3118 700027862486
3868 638027542454
5453 522026392339
5790 500026092519
AUG198013 6   3   44T
72425 3837   8255  246  23912
```

50 RECORDS AT END OF FILE

```
  948 913029122870
 1109 896029062846
 1554 850028722812
 2170 790028142784
 2233 784028302710
 2383 770028502550
 3175 700028282528
 5890 500026592359
72429 3987   8412  298  20013
  298 983029962906
  433 968029702880
  969 910029202871
 1548 850028742814
 2009 805028422772
 2304 777028382538
 2445 764028522552
 3169 700028182518
 3918 639027642464
 4386 603027442594
 4880 567027312541
 5341 535026872577
 5870 500026692489
72520 4053   8023  359  29810
  359 976029662846
  448 966029542854
 1021 904029022859
 1548 850028482839
 2110 794028082792
 2268 779028302660
 3156 700028022502
 4475 595027582458
 5118 549027012401
 5860 500026592359
72637 4297   8373  236  20016
  236 989029542884
  271 985029482858
  895 916028902860
 1389 864028462815
 1526 850028462676
 1846 818028502550
 2001 803028402740
 2590 748028102690
 2927 718028062606
 3135 700027922659
 3301 686027822702
 4133 619027322662
 5054 551026632661
 5284 535026552631
 5611 513026432643
 5810 500026312631

TOTAL OF   197 RECORDS IN FILE UATEMP.813
```

APPENDIX B.

PARTIAL LISTING OF SELECTED "MONTHLY" DATA FILES

50 RECORDS AT BEGINNING OF FILE

```
20   3  18  AVNAFS.S20  07-08/80     0. IREGULAR
PEPE/NEROS 1980               AV        CHEM II - FILTER AEROSOL DATA
(6(F8.0,X),2(F10.2,X),4X,/,8(F8.0,X),8X,/,2(F8.0,X),62X)
DATE      TIME      TIME E    FLT.#     FILTER #  DURATION  FLOW      VOLUME
SO4= (M)  NO3- (M)  SO4= (C)  NO3- (C)  EXT TYPE  ALT       BEG LAT   BEG LONG
END LAT   END LONG
MMDDYY    HHMMSS    HHMMSS    NO.       NO.       MIN       FT^3/MIN  M3
UG        UG        UG/M^3    UG/M^3    CODE      MMSL      DDMMSS    DDMMSS
DDMMSS    DDMMSS
        87
  81580.  235900.  235900.       3.    4004.      60.       4.09       6.57
   2880.     950.      50.      15.       2.    2287.  450000.  950000.
 403000.  873000.
  72480.       0.       0.       1.       1.      10.       1.80       0.71
    250.      87.       1.       1.       1.       0.  300000.  700000.
 363000.  803000.
  72480.  192500.  200400.       1.       3.      39.       4.00       4.42
    980.     102.      10.       1.       2.     762.  401542.  821424.
 394825.  823123.
  72480.  202300.  210500.       1.       5.      42.       4.00       4.76
    996.      87.      10.       1.       2.    1219.  401244.  821955.
 395418.  823333.
  72580.  130900.  132900.       2.       4.      20.       4.00       2.27
    710.     131.      14.       2.       1. -999014.  401715.  825716.
 401410.  825623.
  72580.  133700.  135700.       2.       6.      20.       4.00       2.27
   1742.     485.      35.      12.       1. -999014.  400257.  824651.
 400643.  824536.
  72580.  140900.  142500.       2.       7.      16.       4.00       1.81
    830.     372.      20.      11.       1.    1097.  395600.  823829.
 401224.  825820.
  72580.  144000.  145800.       2.       2.      18.       4.00       2.04
   1670.     277.      38.       7.       1. -999014.  401021.  823302.
 401130.  823007.
  72580.  150800.  152700.       2.       1.      19.       4.00       2.15
   1350.     150.      29.       4.       2.    1097.  395519.  822411.
 402116.  825245.
  73080.  133100.  133900.       1.       9.      12.       4.00       1.36
    840.     211.      27.       8.       1.     762.  395207.  823634.
 393549.  824442.
  73080.  134900.  135300.       1.       9.      12.       4.00       1.36
    840.     211.      27.       8.       1.    1291.  394735.  824703.
 395609.  824147.
  73080.  143400.  144300.       1.      14.      26.       4.00       2.94
   1516.     480.      24.       9.       1.     457.  393201.  823706.
 394954.  822416.
  73080.  150100.  151800.       1.      14.      26.       4.00       2.94
   1516.     480.      24.       9.       1. -999014.  395613.  821555.
 393745.  821808.
  73080.  154900.  161200.       1.      11.      23.       4.00       2.61
```

50 RECORDS AT END OF FILE

```
 81380.  185100.  191400.       1.      71.      23.       4.00       2.61
  1460.     280.      26.       6.       1. -999014.  402458.  824918.
400752.  823421.
 81380.  194300.  201100.       1.      56.      28.       4.00       3.17
  1000.     247.      14.       4.       1. -999014.  402042.  820126.
404533.  820926.
 81380.  201900.  204000.       1.    3002.      21.       4.00       2.38
   940.     180.      18.       4.       1.    1067.  405840.  820953.
401413.  812929.
 81580.  132700.  133900.       1.    3000.      45.       4.00       5.10
   792.     404.       7.       5.       2. -999014.  415041.  830231.
421220.  823351.
 81580.  134700.  142000.       1.    3000.      45.       4.00       5.10
   792.     404.       7.       5.       2. -999014.  422644.  821603.
415243.  825909.
 81580.  142900.  145500.       1.    3001.      26.       4.00       2.94
   650.     180.      10.       3.       1. -999014.  413954.  831704.
410916.  833319.
 81580.  175900.  183200.       2.    4000.      33.       4.00       3.74
   250.     250.       2.       3.       2. -999014.  421521.  820232.
415205.  830826.
 81580.  185500.  191600.       2.      61.      21.       4.00       2.38
   652.     172.      12.       4.       1.    1219.  411736.  833011.
411258.  822305.
 81580.  192200.  194500.       2.    4001.      23.       4.00       2.61
   320.     150.       5.       3.       1.    1219.  410851.  815716.
411131.  804110.
 81580.  201100.  203100.       2.      66.      20.       4.00       2.27
   700.     176.      13.       4.       1.     762.  411204.  815822.
405552.  830542.
 81580.  203900.  205800.       2.    4004.      19.       4.00       2.15
   320.     210.       6.       5.       1. -999014.  404918.  832339.
400356.  830648.
FILTER ANALYSIS BY US EPA/NORTHROP SERVICES, INC.. RTI
NOTE: THE CODE -999014 IS USED TO INDICATE VARIABLE ALTITUDE.

  TIME S = START TIME OF FILTER SAMPLE
  TIME E = END TIME OF FILTER SAMPLE
  FLT # = FLIGHT NUMBER
  FILTER # = FILTER NUMBER
  DURATION = INTEGRATED SAMPLE TIME
  FLOW = AIR FLOW RATE THROUGH SAMPLE
  VOLUME = AIR VOLUME FLOW THROUGH SAMPLE
  SO4= (M) = AEROSOL SULFATE MASS COLLECTION ON SAMPLE
  SO4= (C) = AEROSOL SULFATE CONCENTRATION
  NO3- (M) = AEROSOL NITRATE MASS COLLECTION ON SAMPLE
  NO3- (C) = AEROSOL NITRATE CONCENTRATION
  EXT TYPE = EXTRACTION TYPE CODE
  BEG (LAT/LONG) = LAT/LONG AT TIME S
  END (LAT/LONG) = LAT/LONG AT TIME E


TOTAL OF   294 RECORDS IN FILE AVNAFS.S20
```

50 RECORDS AT BEGINNING OF FILE

```
20   2  10  AVNAHC.S20  07-08/80     0. IREGULAR
PEPE/NEROS 1980                AV        CHEM II - HYDROCARBON DATA
(5(F8.0,X),3(F9.1,X),5X,/,2(F8.0,X),62X)
DATE        TIME       FLIGHT.#  ALT        CAN #      TOTAL HC  C2-C5      SUM UNK
LAT         LONG
MMDDYY      HHMMSS     NO.       MMSL       NO.        PPB C     PPB C      PPB C
DDMMSS      DDMMSS
         68
  81580.  235900.        3.    1524.      400.      148.7      82.9       28.6
 450000.  850000.
  72080.       0.        1.     335.        0.       14.1      10.1        0.0
 300000.  700000.
  72080.  130000.        1.     488.      306.       75.0      45.4        7.0
 402654.  822318.
  72080.  130800.        1.    1372.      307.       25.7      16.3        3.0
 402654.  822318.
  72080.  132500.        1.     762.      280.       61.8      26.3       14.2
 402654.  822318.
  72080.  142700.        1.     457.      185.       44.9      19.7        9.0
 403949.  820249.
  72480.  184600.        1.     457.      285.       53.6      36.6        9.2
 400251.  821437.
  72480.  190500.        1.    1524.      310.       39.5      26.1        1.1
 401641.  824020.
  72480.  212300.        1.    1463.      119.       40.2      34.6        0.6
 401014.  822223.
  72480.  213200.        1.     335.      131.       60.1      45.9        1.9
 401734.  824205.
  72580.  134000.        2.     457.       52.       81.9      53.9        4.5
 400511.  824740.
  72580.  135400.        2.    1402.       74.       77.0      50.3        0.7
 400445.  824733.
  72580.  144100.        2.     488.       61.       26.0      23.8        0.0
 400936.  823522.
  72580.  145400.        2.    1341.      302.       37.3      22.9        9.1
 401012.  823338.
  73080.  133300.        1.     762.      302.      148.7      82.9       14.7
 394646.  823725.
  73080.  135200.        1.    1219.       74.       36.1      24.2        1.9
 395411.  824322.
  73080.  151100.        1.     914.      268.       76.8      47.9        4.9
 393921.  822124.
  73080.  220600.        2.    1219.      119.       58.4      42.6        5.6
 395450.  804421.
  73180.  134000.        1.     762.      179.       57.8      40.6        5.0
 400115.  832237.
  73180.  144600.        1.     610.      181.       75.7      28.7       28.6
 400343.  824416.
  73180.  152100.        1.    1067.       79.       40.3      28.4        3.5
 400710.  823940.
```

50 RECORDS AT END OF FILE

```
401906.  762100.
 80980.   13300.       1.      914.       23.       35.9       26.3       4.4
395911.  794651.
 80980.   15700.       1.      914.      302.       39.2       27.7       1.7
400001.  805945.
 80980.  195700.       2.     1158.      161.       19.9       15.8       0.9
383757.  843249.
 80980.  213700.       2.     1067.       74.       14.1       10.1       1.5
374727.  873742.
 80980.  221900.       2.     1372.      307.       24.8       16.0       1.6
361222.  864326.
 81080.  111000.       1.      914.      310.       19.8       14.5       1.6
342732.  862718.
 81080.  121300.       1.     1067.      105.       17.8       13.9       0.7
334004.  865535.
 81280.  141300.       1.      762.      270.       60.1       41.4       0.8
393302.  821936.
 81280.  143300.       1.     1067.       23.       71.0       39.7       2.3
393338.  821856.
 81280.  151300.       1.      762.      246.       32.6       21.4       0.5
392645.  815903.
 81280.  160000.       1.      762.      302.       46.6       33.5       2.1
393226.  822016.
 81280.  161700.       1.     1067.      280.       42.6       31.2       0.4
393240.  822001.
 81280.  170600.       1.      762.      289.       46.2       34.1       1.9
392201.  815712.
 81380.  190000.       1.     1067.      270.       27.1       20.0       0.6
400811.  823437.
 81380.  194500.       1.     1067.      294.       40.2       27.0       2.0
402423.  820443.
 81380.  202900.       1.     1067.      280.       42.4       31.9       2.2
403803.  815109.
 81580.  141200.       1.      914.      263.      133.4       76.9       4.5
415405.  825706.
 81580.  144500.       1.      914.       34.       34.6       25.9       0.9
412606.  833041.
 81580.  182500.       2.      914.      119.       29.4       15.3       0.4
415613.  830800.
 81580.  190500.       2.     1219.      161.       29.1       19.3       1.3
411742.  825405.
 81580.  193400.       2.     1219.      263.       22.1       14.2       0.5
411138.  811623.
 81580.  202000.       2.      762.       87.       25.7       11.3       2.5
410221.  823011.
HYDROCARBON CANS ANALYZED BY US EPA/RTI.

  TOTAL HC = TOTAL HYDROCARBONS
  C2-C5 = SUM OF C2-C5 HYDROCARBONS
  SUM UNK = SUM OF UNKNOWNS


TOTAL OF   153 RECORDS IN FILE AVNAHC.S20
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50 RECORDS AT BEGINNING OF FILE

```
20   3  23  AVS1WS.S20  07-08/80     0. IREGULAR
PEPE/NEROS 1980                AV         SODAR 1, DOPPLER WIND SPEED
(5(F8.0,X),3(F9.1,X),5X,/,8(F9.1,X),/,7(F9.1,X),10X)
DATE      TIME      SODAR#    LAT       LONG      WS02      WS03      WS04
WS05      WS06      WS07      WS08      WS09      WS10      WS11      WS12
WS13      WS14      WS15      WS16      WS17      WS18      WS19
MMDDYY    HHMMSS    NO.       DDMMSS    DDMMSS    MS-1      MS-1      MS-1
MS-1      MS-1      MS-1      MS-1      MS-1      MS-1      MS-1      MS-1
MS-1      MS-1      MS-1      MS-1      MS-1      MS-1      MS-1
       663
  81580.  235959.       2.  403000.  873000.      25.0      25.0      25.0
     25.0      25.0      25.0      25.0      25.0      25.0      25.0      25.0
     25.0      25.0      25.0      25.0      25.0      25.0      25.0
  71880.       0.       1.  363000.  803000.       0.0       0.0       0.0
      0.0       0.0       0.0       0.0       0.0       0.0       0.0       0.0
      0.0       0.0       0.0       0.0       0.0       0.0       0.0
  71880.  100200.       1.  400845.  824200.       1.7       1.6       1.7
      1.9       1.9       1.8       1.8       1.9       1.8       2.5 -999001.0
-999001.0 -999001.0 -999001.0 -999001.0 -999001.0 -999001.0 -999001.0
  71880.  101200.       1.  400845.  824200.       1.3       1.5       1.7
      1.6       1.9       2.1       2.1       2.0       1.8       1.6       1.7
      1.9       2.3       2.5 -999001.0       4.2 -999001.0 -999001.0
  71880.  102200.       1.  400845.  824200.       2.1       2.2       2.3
      2.3       2.4       2.5       2.8       2.9       2.9       3.3       3.5
      3.0       2.9       3.0       2.7       2.5       2.9 -999001.0
  71880.  103200.       1.  400845.  824200.       2.8       1.9       2.2
      2.1       1.9       1.8       1.6       1.2       1.1 -999001.0 -999001.0
-999001.0 -999001.0 -999001.0 -999001.0 -999001.0 -999001.0 -999001.0
  71880.  104200.       1.  400845.  824200.       2.1       2.6       2.7
      3.9       4.4       2.5       3.6       3.0       2.7       2.2       2.3
      2.4       2.7       3.1 -999001.0       4.2       2.8 -999001.0
  71880.  105200.       1.  400845.  824200.       2.9       2.9       3.0
      3.0       2.8       2.6       2.8       2.8       2.9       2.9       2.9
      2.9       2.9       2.9       2.7       2.5       3.2       4.0
  71880.  110200.       1.  400845.  824200.       1.8       2.3       2.7
      2.9       2.8       2.7       2.6       3.6       3.3       3.8       2.2
      2.2       2.7       3.1       3.3 -999001.0 -999001.0       4.0
  71880.  111200.       1.  400845.  824200.       1.9       1.9       1.8
      2.2       2.2       1.7       1.7       2.0       2.4       2.9       2.0
      1.9       1.2       1.0       0.8       2.1 -999001.0 -999001.0
  71880.  112200.       1.  400845.  824200.       1.1       3.6       4.0
      4.5       4.7       4.6       4.5       4.1       3.7       3.0       3.2
      2.8       2.9       2.2 -999001.0       1.3 -999001.0 -999001.0
  71880.  113200.       1.  400845.  824200.       2.5       3.3       3.4
      2.6       2.8       2.7       3.8       2.5       2.8       2.9       2.6
      2.3       5.6       3.6       3.9       2.5 -999001.0 -999001.0
  71880.  114200.       1.  400845.  824200.       3.8       4.5       4.4
      4.4       4.7       5.0       5.7       5.9       5.9       5.7       5.8
      5.7       5.1       5.1       2.5       4.7       4.4       5.2
  71880.  115200.       1.  400845.  824200.       2.6       2.8       2.5
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60 RECORDS AT END OF FILE

```
     2.6       4.3       4.7       4.7 -999001.0 -999001.0 -999001.0 -999001.0
-999001.0 -999001.0 -999001.0 -999001.0 -999001.0 -999001.0 -999001.0
  81380.  213200.        1.  400400.  830310.       2.4       2.8       4.0
     4.5       4.6       5.0       5.4 -999001.0 -999001.0 -999001.0 -999001.0
-999001.0 -999001.0 -999001.0 -999001.0 -999001.0 -999001.0 -999001.0
  81380.  214700.        1.  400400.  830310.       1.9       2.3       2.8
     3.3       3.8       4.6       5.4 -999001.0 -999001.0 -999001.0 -999001.0
-999001.0 -999001.0 -999001.0 -999001.0 -999001.0 -999001.0 -999001.0
```

AV DOPPLER ACOUSTIC SOUNDER: WIND SPEED PROFILES

NOTE: REPORTING LEVELS ARE ABOVE GROUND LEVEL.

LEVEL N = 30N METERS AGL
EXAMPLE: WS02 = WIND SPEED AT LEVEL 2

THE FOLLOWING ARE COLLECTIVELY ALL THE LOCATIONS OF SODARS 1 AND/OR 2 DURING THE PEPE FIELD PROGRAM:

LOCATION	LAT.DEG.N.	LONG.DEG.W.	ALT. MMSL
JOHNSTOWN, OH	40 08'45"	82 42'00"	366
NEWARK, OH	40 04'45"	82 23'50"	269
WHEELING, WV	40 03'00"	80 41'30"	365
COSHOCTON AIRPORT, OH	40 17'00"	81 53'00"	298
PATASKALA, OH	40 00'00"	82 40'45"	329
OSU AIRPORT, OH	40 04'00"	83 04'00"	276
KENNY ROAD GARAGE, OH	40 04'00"	83 03'10"	276
LONDON, OH	39 53'15"	83 27'30"	329
KNOX CO. AIRPORT, OH	40 19'28"	82 30'53"	363
MASON CO. AIRPORT, WV	38 54'45"	82 05'45"	196
MADISON LAKE, OH	39 52'30"	83 20'30"	312
OSU SCIENCE FARM, OH	40 04'20"	83 04'30"	276
BUCKEYE LAKE, OH	39 56'15"	82 29'00"	276
NEW ALBANY, OH	40 04'45"	82 49'00"	320
OUTLAW FIELD, TN	36 37'00"	87 24'45"	168
FORT CAMPBELL, TN	36 40'32"	87 28'16"	174
BOLTON FIELD, OH	39 54'00"	83 08'00"	276

THE FOLLOWING ARE DATES AND LOCATIONS OF SODAR 1:

DATE	LOCATION	
7/18/80	JOHNSTOWN, OH	
7/20/80	NEWARK, OH	
7/21/80	WHEELING, WV	
7/24/80	COSHOCTON AIRPORT, OH	
7/25/80	COSHOCTON AIRPORT, OH	
7/30/80	PATASKALA, OH	
7/31/80	PATASKALA, OH	
8/01/80	OSU AIRPORT, OH	
8/02/80	KENNY ROAD GARAGE, OH	(0814 -- 1000)
8/02/80	LONDON, OH	(1410 -- 1657)
8/04/80	KNOX CO AIRPORT, OH	
8/07/80	MASON CO AIRPORT, WV	
8/08/80	MASON CO AIRPORT, WV	

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  8/09/80     KENNY ROAD GARAGE, OH
  8/10/80     KENNY ROAD GARAGE, OH
  8/11/80     KENNY ROAD GARAGE, OH
  8/12/80     KENNY ROAD GARAGE, OH
  8/13/80     KENNY ROAD GARAGE, OH

TOTAL OF  2057 RECORDS IN FILE AVS1WS.S20
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50 RECORDS AT BEGINNING OF FILE

```
20   3  23  AVS1WD.S20  07-08/80      0. IREGULAR
PEPE/NEROS 1980                  AV        SODAR 1, DOPPLER WIND DIRECTION
(8(F8.0,X),8X,/,8(F8.0,X),8X,/,7(F8.0,X),17X)
DATE      TIME      SODAR#    LAT       LONG      WD02      WD03      WD04
WD05      WD06      WD07      WD08      WD09      WD10      WD11      WD12
WD13      WD14      WD15      WD16      WD17      WD18      WD19
MMDDYY    HHMMSS    NO.       DDMMSS    DDMMSS    DEG. T    DEG. T    DEG. T
DEG. T    DEG. T    DEG. T    DEG. T    DEG. T    DEG. T    DEG. T    DEG. T
DEG. T    DEG. T    DEG. T    DEG. T    DEG. T    DEG. T    DEG. T
      663
   81580.  235959.       2.  403000.  873000.     360.     360.     360.
     360.     360.     360.     360.     360.     360.     360.     360.
     360.     360.     360.     360.     360.     360.     360.
   71880.       0.       1.  363000.  803000.       0.       0.       0.
       0.       0.       0.       0.       0.       0.       0.       0.
       0.       0.       0.       0.       0.       0.       0.
   71880.  100200.       1.  400845.  824200. -999001.     162.     177.
     180.     201.     204.     195.     198.     204.     213.     240.
 -999001. -999001. -999001. -999001. -999001. -999001. -999001.
   71880.  101200.       1.  400845.  824200. -999001.     171.     177.
     192.     186.     204.     210.     210.     216.     219.     225.
     231.     231.     234.     240. -999001.     252. -999001.
   71880.  102200.       1.  400845.  824200. -999001.     219.     222.
     228.     228.     231.     228.     228.     231.     231.     237.
     240.     231.     231.     228.     225.     222.     231.
   71880.  103200.       1.  400845.  824200. -999001.     189.     192.
     204.     201.     207.     201.     207.     192.     192. -999001.
 -999001. -999001. -999001. -999001. -999001. -999001. -999001.
   71880.  104200.       1.  400845.  824200. -999001.     207.     222.
     255.     204.     204.     240.     216.     222.     225.     207.
     204.     210.     219.     228. -999001.     240.     231.
   71880.  105200.       1.  400845.  824200. -999001.     171.     165.
     162.     162.     165.     165.     165.     168.     162.     174.
     177.     174.     174.     183.     183.     186.     198.
   71880.  110200.       1.  400845.  824200. -999001.     180.     180.
     177.     162.     180.     198.     210.     228.     216.     231.
     201.     201.     210.     213.     207. -999001. -999001.
   71880.  111200.       1.  400845.  824200. -999001.     249.     249.
     243.     243.     240.     225.     219.     219.     204.     180.
     207.     186.     171.     135.     225.     252.     183.
   71880.  112200.       1.  400845.  824200. -999001.     225.     264.
     270.     273.     273.     270.     270.     270.     270.     270.
     264.     252.     252.     249. -999001.     240. -999001.
   71880.  113200.       1.  400845.  824200. -999001.     270.     273.
     273.     279.     288.     288.     276.     279.     279.     279.
     282.     279.     270.     264.     258.     249. -999001.
   71880.  114200.       1.  400845.  824200. -999001.     252.     255.
     252.     255.     258.     258.     258.     258.     258.     258.
     255.     258.     258.     255.     255.     219.     240.
   71880.  115200.       1.  400845.  824200. -999001.     276.     276.
```

60 RECORDS AT END OF FILE

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   276.     267.     264.     261.     261. -999001. -999001. -999001.
-999001. -999001. -999001. -999001. -999001. -999001. -999001.
  81380.  213200.       1.  400400.  830310. -999001.     276.     273.
   267.     258.     252.     252.     252. -999001. -999001. -999001.
-999001. -999001. -999001. -999001. -999001. -999001. -999001.
  81380.  214700.       1.  400400.  830310. -999001.     276.     270.
   261.     255.     252.     249.     249. -999001. -999001. -999001.
-999001. -999001. -999001. -999001. -999001. -999001. -999001.
```

AV DOPPLER ACOUSTIC SOUNDER: WIND DIRECTION PROFILES

NOTE: REPORTING LEVELS ARE ABOVE GROUND LEVEL.

LEVEL N = 30N METERS AGL
EXAMPLE: WD02 = WIND DIRECTION AT LEVEL 2

THE FOLLOWING ARE COLLECTIVELY ALL THE LOCATIONS OF SODARS 1 AND/OR 2 DURING THE PEPE FIELD PROGRAM:

LOCATION	LAT.DEG.N.	LONG.DEG.W.	ALT. MMSL
JOHNSTOWN, OH	40 08'45"	82 42'00"	366
NEWARK, OH	40 04'45"	82 23'50"	269
WHEELING, WV	40 03'00"	80 41'30"	365
COSHOCTON AIRPORT, OH	40 17'00"	81 53'00"	298
PATASKALA, OH	40 00'00"	82 40'45"	329
OSU AIRPORT, OH	40 04'00"	83 04'00"	276
KENNY ROAD GARAGE, OH	40 04'00"	83 03'10"	276
LONDON, OH	39 53'15"	83 27'30"	329
KNOX CO. AIRPORT, OH	40 19'28"	82 30'53"	363
MASON CO. AIRPORT, WV	38 54'45"	82 05'45"	196
MADISON LAKE, OH	39 52'30"	83 20'30"	312
OSU SCIENCE FARM, OH	40 04'20"	83 04'30"	276
BUCKEYE LAKE, OH	39 56'15"	82 29'00"	276
NEW ALBANY, OH	40 04'45"	82 49'00"	320
OUTLAW FIELD, TN	36 37'00"	87 24'45"	168
FORT CAMPBELL, TN	36 40'32"	87 28'16"	174
BOLTON FIELD, OH	39 54'00"	83 08'00"	276

THE FOLLOWING ARE DATES AND LOCATIONS OF SODAR 1:

DATE	LOCATION	
7/18/80	JOHNSTOWN, OH	
7/20/80	NEWARK, OH	
7/21/80	WHEELING, WV	
7/24/80	COSHOCTON AIRPORT, OH	
7/25/80	COSHOCTON AIRPORT, OH	
7/30/80	PATASKALA, OH	
7/31/80	PATASKALA, OH	
8/01/80	OSU AIRPORT, OH	
8/02/80	KENNY ROAD GARAGE, OH	(0814 -- 1000)
8/02/80	LONDON, OH	(1410 -- 1657)
8/04/80	KNOX CO AIRPORT, OH	
8/07/80	MASON CO AIRPORT, WV	
8/08/80	MASON CO AIRPORT, WV	

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  8/09/80     KENNY ROAD GARAGE, OH
  8/10/80     KENNY ROAD GARAGE, OH
  8/11/80     KENNY ROAD GARAGE, OH
  8/12/80     KENNY ROAD GARAGE, OH
  8/13/80     KENNY ROAD GARAGE, OH

TOTAL OF  2057 RECORDS IN FILE AVS1WD.S20
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50 RECORDS AT BEGINNING OF FILE

20   12 128  HCFTHS.S20  07-08/80      0. IREGULAR
PEPE/NEROS 1980             EPA-GKPB  HYDROCARBON DATA, FT. HAYES
(5F7.0,6F7.1,3X/11(11F7.1,3X/))
DATE      TIME S    TIME E    LONG W    LAT N     ELEV      SAMPLE #  METHANE
CO        HC(1)     HC(2)     HC(3)     HC(4)     HC(5)     HC(6)     HC(7)
HC(8)     HC(9)     HC(10)    HC(11)    HC(12)    HC(13)    HC(14)    HC(15)
HC(16)    HC(17)    HC(18)    HC(19)    HC(20)    HC(21)    HC(22)    HC(23)
HC(24)    HC(25)    HC(26)    HC(27)    HC(28)    HC(29)    HC(30)    HC(31)
HC(32)    HC(33)    HC(34)    HC(35)    HC(36)    HC(37)    HC(38)    HC(39)
HC(40)    HC(41)    HC(42)    HC(43)    HC(44)    HC(45)    HC(46)    HC(47)
HC(48)    HC(49)    HC(50)    HC(51)    HC(52)    HC(53)    HC(54)    HC(55)
HC(56)    HC(57)    HC(58)    HC(59)    HC(60)    HC(61)    HC(62)    HC(63)
HC(64)    HC(65)    HC(66)    HC(67)    HC(68)    HC(69)    HC(70)    HC(71)
HC(72)    HC(73)    HC(74)    HC(75)    HC(76)    HC(77)    HC(78)    HC(79)
HC(80)    HC(81)    HC(82)    HC(83)    HC(84)    HC(85)    HC(86)    HC(87)
HC(88)    HC(89)    HC(90)    HC(91)    HC(92)    HC(93)    HC(94)    HC(95)
HC(96)    HC(97)    HC(98)    HC(99)    HC(100)   HC(101)   HC(102)   HC(103)
HC(104)   HC(105)   HC(106)   HC(107)   HC(108)   HC(109)   HC(110)   HC(111)
HC(112)   HC(113)   HC(114)   HC(115)   HC(116)   HC(117)   HC(118)   HC(119)
YYMMDD    HHMMSS    HHMMSS    DDMMSS    DDMMSS    M MSL     #         PPM
PPM       PPBC      PPBC      PPBC      PPBC      PPBC      PPBC      PPBC
PPBC      PPBC      PPBC      PPBC      PPBC      PPBC      PPBC      PPBC
PPBC      PPBC      PPBC      PPBC      PPBC      PPBC      PPBC      PPBC
PPBC      PPBC      PPBC      PPBC      PPBC      PPBC      PPBC      PPBC
PPBC      PPBC      PPBC      PPBC      PPBC      PPBC      PPBC      PPBC
PPBC      PPBC      PPBC      PPBC      PPBC      PPBC      PPBC      PPBC
PPBC      PPBC      PPBC      PPBC      PPBC      PPBC      PPBC      PPBC
PPBC      PPBC      PPBC      PPBC      PPBC      PPBC      PPBC      PPBC
PPBC      PPBC      PPBC      PPBC      PPBC      PPBC      PPBC      PPBC
PPBC      PPBC      PPBC      PPBC      PPBC      PPBC      PPBC      PPBC
PPBC      PPBC      PPBC      PPBC      PPBC      PPBC      PPBC      PPBC
PPBC      PPBC      PPBC      PPBC      PPBC      PPBC      PPBC      PPBC
PPBC      PPBC      PPBC      PPBC      PPBC      PPBC      PPBC      PPBC
PPBC      PPBC      PPBC      PPBC      PPBC      PPBC      PPBC      PPBC
PPBC      PPBC      PPBC      PPBC      PPBC      PPBC      PPBC      PPBC
        58
800815.235959.235959.900000.500000. 3000.0  999.0   10.0   10.0  100.0  100.0
  100.0  100.0  100.0  100.0  100.0  100.0  100.0  100.0  100.0  100.0  100.0
  100.0  100.0  100.0  100.0  100.0  100.0  100.0  100.0  100.0  100.0  100.0
  100.0  100.0  100.0  100.0  100.0  100.0  100.0  100.0  100.0  100.0  100.0
  100.0  100.0  100.0  100.0  100.0  100.0  100.0  100.0  100.0  100.0  100.0
  100.0  100.0  100.0  100.0  100.0  100.0  100.0  100.0  100.0  100.0  100.0
  100.0  100.0  100.0  100.0  100.0  100.0  100.0  100.0  100.0  100.0  100.0
  100.0  100.0  100.0  100.0  100.0  100.0  100.0  100.0  100.0  100.0  100.0
  100.0  100.0  100.0  100.0  100.0  100.0  100.0  100.0  100.0  100.0  100.0
  100.0  100.0  100.0  100.0  100.0  100.0  100.0  100.0  100.0  100.0  100.0
  100.0  100.0  100.0  100.0  100.0  100.0  100.0  100.0  100.0  100.0  100.0
  100.0  100.0  100.0  100.0  100.0  100.0  100.0
800715.     0.     0.700000.300000.    0.0    0.0    0.0    0.0    0.0    0.0
    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0

150 RECORDS AT END OF FILE
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```
    0.0     0.0     0.0     0.0     0.4     0.0     0.0     0.0     0.0  1111.1     1.0
    3.1     0.8     6.0     0.0     0.8  1111.1     1.0
800814.140000.160000.825954.395818.       0.0   258.0     2.2     0.7    17.9    15.7
    4.7    12.2     2.7    12.2    29.3     3.3     0.0     2.4     2.0    23.7    10.5
    1.0     1.4     0.6     0.8     0.0     0.0     0.0     1.2     0.0     0.0     6.5
    3.9     0.4     4.4     0.0     0.0     0.0     0.0     2.9     0.0  1111.1     0.0
    0.3     3.8     0.7     2.1     0.6     1.4     1.0     0.0     0.0     0.0     0.0
    0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     9.7     0.0
    0.0     0.0     0.0     0.0     0.0     0.0     1.7     0.0     3.9     0.3     0.4
    0.4     0.0     0.0     1.2     0.0     2.9     2.8     4.7     2.4     3.0     1.6
    0.3     1.1     2.8     0.5     0.5     1.5     2.7     0.0     2.2     0.0     0.2
    0.4     0.4     3.4    18.8     0.0     0.0     0.0     0.0     0.0     0.0     0.0
    0.0     0.0     0.0     0.0     0.3     0.0     0.0     0.0     0.0  1111.1     0.0
    1.2     0.6     1.0     0.0     0.2  1111.1     0.0
 GROUND STATION SAMPLES COLLECTED IN BAGS
 AIRCRAFT SAMPLES COLLECTED IN CANS

 DATA VALUE OF 1111.1 INDICATES LACK OF VALID DATA
 DATA VALUE OF  -10.0 INDICATES LACK OF VALID DATA

 PARAMETER DEFINITIONS
 TIME S = START TIME OF SAMPLE
 TIME E = END TIME OF SAMPLE

 HYDROCARBON SPECIES:
 SPECIES NO.    SAROAD I.D.    SPECIES NAME
      1            43202       ETHANE
      2            43203       ETHYLENE
      3            43206       ACETYLENE
      4            43204       PROPANE
      5            43205       PROPENE
      6            43214       I-BUTANE
      7            43212       N-BUTANE
      8            43125       I-BUTENE+1-BUTENE (ISOBUTYLENE)
      9            43215       I-BUTENE
     10            43216       T-2-BUTENE
     11            43217       C-2-BUTENE
     12            43221       I-PENTANE
     13            43220       N-PENTANE
     14            43225       2-METHYL-1-BUTENE
     15            43218       1,3-BUTADIENE
     16            43224       1-PENTENE
     17            43243       ISOPRENE
     18            43223       3-METHYL-1-BUTENE
     19            43244       2,2-DIMETHYLBUTANE
     20            43292       CYCLOPENTENE
     21            43127       CYCLOPENTANE+2,3-DIMETHYLBUTANE
     22            43001       4-METHYL-1-PENTENE
     23            43291       2,3-DIMETHYLBUTANE
     24            43229       2-METHYLPENTANE
     25            43128       3-METHYLPENTANE+CYCLOPENTENE
     26            43245       N-HEXENE-1
     27            43231       N-HEXANE
     28            43005       T-2-HEXENE
     29            43004       C-2-HEXENE
```

30	43262	METHYLCYCLOPENTANE
31	43007	2,2,3-TRIMETHYLBUTANE
32	43131	MECYCLOPENTANE+2,4-DIMEPENTANE
33	45201	BENZENE
34	43248	CYCLOHEXANE
35	43263	2-METHYLHEXANE
36	43274	2,3-DIMETHYLPENTANE
37	43249	3-METHYLHEXANE
38	43010	1,3-T-DIMETHYLCYCLOPENTANE
39	43250	2,2,4-TRIMETHYLPENTANE
40	43011	1,3-C-DIMETHYLCYCLOPENTANE
41	43232	N-HEPTANE
42	43251	METHYLCYCLOHEXANE
43	43012	ETHYLCYCLOPENTANE
44	43277	2,4-DIMETHYLHEXANE
45	43016	2,3,4-TRIMETHYLHEXANE
46		UNKNOWN 01
47		UNKNOWN 02
48		UNKNOWN 03
49		UNKNOWN 04
50		UNKNOWN 05
51		UNKNOWN 06
52		UNKNOWN 07
53		UNKNOWN 08
54		UNKNOWN 09
55		UNKNOWN 10
56	45202	TOLUENE
57	43013	2,3-DIMETHYLHEXANE
58	43015	2-METHYLHEPTANE
59	43253	3-METHYLHEPTANE
60	43017	2,2,5-TRIMETHYLHEXANE
61	43133	DIMETHYLCYCLOHEXANE
62	43233	N-OCTANE
63	43288	ETHYLCYCLOHEXANE
64		UNKNOWN 11
65		UNKNOWN 12
66		UNKNOWN 13
67		UNKNOWN 14
68		UNKNOWN 15
69		UNKNOWN 16
70		UNKNOWN 17
71		UNKNOWN 18
72		UNKNOWN 19
73		UNKNOWN 20
74	45203	ETHYLBENZENE
75	45206	P-XYLENE
76	45205	M-XYLENE
77	45220	STYRENE
78	45204	O-XYLENE
79	43235	N-NONANE
80	45210	I-PROPYLBENZENE
81	45209	N-PROPYLBENZENE
82	45111	M-ETHYLTOLUENE+P-ETHYLTOLUENE
83	45207	1,3,5-TRIMETHYLBENZENE
84	45211	O-ETHYLTOLUENE
85	45216	SEC-BUTYLBENZENE

86	45208	1,2,4-TRIMETHYLBENZENE
87	45225	1,2,3-TRIMETHYLBENZENE
88	43238	N-DECANE
89	45221	METHYLSTYRENE
90	45218	1,3-DIETHYLBENZENE
91	45219	1,4-DIETHYLBENZENE
92	45217	1,2-DIETHYLBENZENE
93	43241	UNDECANE
94	43140	REPORTED + UNREPORTED UNKNOWNS
95	43293	T-4-METHYL-2-PENTENE
96	43003	C-4-METHYL-2-PENTENE
97	43246	2-METHYL-1-PENTENE
98	43269	2-METHYL-2-PENTENE
99	43270	T-3-METHYL-2-PENTENE
100	43002	C-3-METHYL-2-PENTENE
101	43814	1,1,1-TRICHLOROETHANE
102	43272	1-METHYLCYCLOPENTENE
103	43134	TRIMETHYLCYCLOPENTANE
104	43278	2,5-DIMETHYLHEXANE
105	43014	3-ETHYLHEXANE
106	43256	ALPHA PINENE
107	43257	BETA PINENE
108	40003	LIMONENE
109	40002	DELTA-CARENE
110	40001	BETA-PHELLANDRENE
111	43503	ACETALDEHYDE
112	43551	ACETONE
113	43226	T-2-PENTENE
114	43227	C-2-PENTENE
115	43228	2-METHYL-2-BUTENE
116	43130	4-METHYL-2-PENTENE
117	43006	T-3-HEXENE
118	43268	C-3-HEXENE
119	43009	3,3-DIMETHYLPENTANE

CONTACTS:
RE - DATA COLLECTION -- WILLIAM LONNEMAN, EPA-RTP (919)-541-2829
RE - ORIGINAL DATA BASE CREATION -- MYRON RANDALL, EPA-RTP (919)-541-2998
RE - STATE-20 FORMAT DATA -- NOOR GILLANI, WU (314)-889-6079

TOTAL OF 892 RECORDS IN FILE HCFTHS.S20

```
20 RECORDS AT BEGINNING OF FILE

 109 80  7 15  1  0   66 13  6   72   68  82  2  29   0  2   0  2   0  2 999  2
00   242   0   0 10162 2914 250 999 999 999  159
 109 80  7 15  4  0   68 16  7   72   69  87 10 103  -1 -1  -1 -1  -1 10  60  8
00   302  40   0 10154 2912  60  -1  -1  -1   -1
 109 80  7 15  7  2   67 15  5   73   69  82  3  17  28  3   0  3   0  1 999  2
00   484   0   0 10155 2913  80 250 999 999  318
 109 80  7 15 10  0   72 17 11   84   76  67  2  27   0  2   0  2   0  2 999  2
00   346   0   0 10151 2911  90 999 999 999  326
 109 80  7 15 13  2   77 20 14   93   81  60  0  -1  -1 -1  -1 -1  -1  0 999
 0   484   0   0 10139 2908  -1  -1  -1  -1  484
 109 80  7 15 16  2   79 21 12   97   83  56  0  -1  -1 -1  -1 -1  -1  0 999
 0   403   0   0 10131 2906  -1  -1  -1  -1  409
 109 80  7 15 19  2   79 19 11   92   82  66  0  -1  -1 -1  -1 -1  -1  0 999
 0   484   0   0 10128 2905  -1  -1  -1  -1  460
 109 80  7 15 22  2   79 17 11   85   80  82  0  -1  -1 -1  -1 -1  -1  0 999
 0   605   0   0 10129 2905  -1  -1  -1  -1  398
 109 80  7 16  1  2   78 15  6   81   79  91  0  -1  -1 -1  -1 -1  -1  0 999
 0   605   0   0 10128 2905  -1  -1  -1  -1  183
 109 80  7 16  4  2   75 16  7   79   76  88  2  28   0  2   0  2   0  2 999  2
00   605   0   0 10122 2903 250 999 999 999  263


20 RECORDS AT END OF FILE

 109 80  8 14 19  0   67 24 12   83   72  59  9  24  17  3  68  9   0  7 250  2
50   346   0   0 10136 2907  40  80 250 999  347
 109 80  8 14 22  0   67 24  7   77   70  71  9  67  38  9   0  9   0  8  80  5
00   346   0   0 10146 2910  80 250 999 999  312
 109 80  8 15  1  0   66 27  6   75   69  74 10  63  47 10  -1 -1  -1 10  55  5
00   346  40   0 10138 2908  55 140  -1  -1   -1
 109 80  8 15  4  0   66  0  0   70   67  87 10  43 106 10  -1 -1  -1 10 100  2
00   403  10   0 10137 2907  40 100  -1  -1   -1
 109 80  8 15  7 10   67  6  5   70   68  90 10  12  63  7  36 10  -1 10  40  2
80   969  10   0 10140 2908   9  40  80  -1   -1
 109 80  8 15 10 10   66 13  3   70   67  87 10  72  32 10  -1 -1  -1 10   8  5
00   969  10   0 10150 2911   8  30  -1  -1   -1
 109 80  8 15 13  0   68 28  5   76   71  76 10  64  47 10  -1 -1  -1 10  12  5
00   302   0   0 10145 2909  12  90  -1  -1  242
 109 80  8 15 16  0   68 36 12   74   70  82 10  63 103 10  -1 -1  -1 10  17  5
00   346   0   0 10141 2908  17  35  -1  -1  227
 109 80  8 15 19  0   63  2  5   73   67  71 10  43 103 10  -1 -1  -1 10  35  2
00   346   0   0 10143 2908  20  35  -1  -1  312
 109 80  8 15 22  0   61 36  7   70   64  73 10  43 109 10  -1 -1  -1 10 250  2
00   346   0   0 10161 2913  50 250  -1  -1  299


TOTAL OF   512 RECORDS IN FILE NWSCOL.DAT
```

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APPENDIX C.

C.1 STATE-20 DOCUMENTATION

The STATE-20 data file format has been designed for data of a time-series form, i.e. sequential data records, each consisting of a time and corresponding values of a certain number of measured variables. Most data in the STATE data base, (comprising the GDDBs of MISTT, TPS, PEPE/NEROS, and CWPS) are of this form. Hence, STATE-20 is the most predominant data file format in these GDDBs.

File Format

The entire file is written in fixed 80-character card images (logical records). Each file has the following overall structure:

HEADER SECTION
DATA SECTION
COMMENTS SECTION
EOF (End of File mark)

The *comments section* consists of an arbitrary number of logical records with literal information of an elucidatory nature -- who, what, when, where, why, how, problems, quality assessment, exceptions, definitions, etc. It includes, in particular, definitions of data variables whose names are not self-explanatory. The comments section starts immediately following the data section. No separation markers or records exist. The start of the data section and its length, however, are predefined. The end of the comments is followed by an end-of-file (EOF) marker.

The *data section* contains the actual data of the measured variables, grouped into individual repeated observations. Each observation consists of one set of values of the measured variables (including date and time of the observation). Observations are sequential and chronological, and they all have the same format since the same variables are repeated in each observation. This observation format is a predefined syntactically correct FORTRAN format incorporating several 80-character records in one observation.

The *header section* contains important information which self-documents the file format and contents. It defines the number of variables (NVAR) and the number of 80-character logical records (NREC) in each observation; it identifies the data variables by their assigned names, and gives the specific FORTRAN format of each observation of data; and it gives the averaging time of the observation (i.e. the inter-observation time interval for continuous data) and the overall size of the data section, i.e. the total number of observations (NOBS) in the data section.

The detailed record-by-record documentation of the file is as follows:

Header Records (Logical H1, H2, ...)

H1: Content - NVERSION, NREC, NVAR, FILENAME, DATEC, DELTAT, UNITDT

Column(s)	-	1-2	5-6	7-10	13-22	25-32	35-39	41-48
Format	-	I2	I2	I2	10A1*	8A1	F5.0	8A1*

(* = left justified)

Definitions -

NVERSION = 20 = current version of this STATE format

NREC = number of 80-character logical records per observation

NVAR = number of variables in one observation

FILENAME = FFFFFF.XXX

FFFFFF = any upto-6-character alphanumeric filename, starting in column 13. Usually, this name has the form OOOOyy, where OOOO is an identifier of organization/platform collecting data, and yy denotes year of data collection. Examples: MRI75, WU76, NASA80, UVDIAL

.XXX = any upto-3-character alphanumeric filename extension. For dated missions, we recommend XXX to provide the date in the form mdd, where m=month (1-9 = Jan-Sept; A,B,C = Oct,Nov,Dec), and dd=day of month (1-31)

DATEC = Date of data collection, preferably in the format mm/dd/yy.

DELTAT = Time interval between successive observations, if fixed (0 for irregular intervals).

UNITDT = Unit of DELTAT (e.g. HOURS, MIN, SEC, etc.)

H2: Content - PROJECT, ORGANIZATION COLLECTING DATA, DATA DESCRIPTION

Format - (30A1, 10A1, 40A1)

H3: Data encoding format in parentheses. The format is assumed to be syntactically correct FORTRAN format with NVAR fields in F or E format (no I-format); use of X for spacing and / for line feed may be used in the format statement. Example for an observation with NVAR = 17 and NREC = 2:
(9F8.2, 8X, /, 5F7.1, 3E13.6, 6X)

H(4a, 4b, etc...as needed):
Names of the NVAR data variables, 8 per line, in (8(8A1, 2X)) format.

H(5a, 5b, etc...as needed):
Units of the NVAR variables, 8 per line, in (8(8A1, 2X)) format.

H6: Number of total data observations (NOBS) in file in I10 format.

--- End of Header Section ---

Data Records (Logical D1, D2, ...)

The total number of logical records in this section is NREC*(NOBS+2). The first 2*NREC records contain the physical upper and lower bounds of all data variables. The remaining NREC*NOBS records contain the actual data of the NOBS observations. The data section thus has the following record-by-record form:

D(1 to NREC):
Physical upper bounds of data variable values in specified FORTRAN format for any data observation

D(NREC+1 to 2*NREC):
Physical lower bounds of data variable values in observation format

D(2*NREC + 1 to NREC*[NOBS+2]):
The actual observed data in observation format.

--- End of Data Section ---

Comment Records (Logical C1, C2, ...)

C1 to Last logical record of file:

Arbitrary number of logical records with literal comments containing any useful information concerning the program, the data variables, data quality assessment, references to related reports, people to contact for help, or any other useful message for posterity.

EOF

--- End of File ---

C.2 STATE-VS DOCUMENTATION

The STATE-VS format has been designed as a complement to the currently existing STATE-20 format. STATE-20 is appropriate for time-series type data, while STATE-VS is appropriate for vertical soundings type data, e.g. pibal, radiosonde, sodar, etc.

File Format

Each file normally contains the data of all vertical soundings of a given platform (or station) for a given day. The filename has the form nnnnnn.mdd, nnnnnn= any I.D. of file (e.g. organization,
type of data, etc.), and
mdd = month, day (e.g. 724=July 24)
= date of data collection
(A=October, B=November, C=December)

The overall file format is as follows:

FILE HEADER RECORDS &&	
SUBFILE 1 (for first sounding) @@	subfile header records subfile data records subfile comment records
SUBFILE 2 (second sounding) @@	subfile header records subfile data records subfile comment records
⋮ SUBFILE n ⋮ @@	
&& FILE COMMENT RECORDS	
EOF	

The main file header defines such specific items common to all soundings in the file as Project, Organization Collecting Data, Type of Data, Filename, Reported Data Parameters, their Units, Range, etc., Data Record Format and Size, etc. If the data are of vertical soundings, the first parameter should be the height level (altitude).

The main file comments provide any additional information common to the total data set which is judged useful, but which cannot be included in the main file header.

Each subfile contains the information pertinent to a single sounding. Subfiles must be arranged in chronological order. The subfile header specifically defines the time and location of the sounding and the number of records (height levels for a vertical sounding) in the subfile. Each data record provides a height level and the corresponding data of the measured parameters (e.g. wind speed, wind direction). The subfile is concluded by any comment records specific to this sounding.

Logical record size is fixed at 80 characters.

(a) Main File Header

The main file header defines specific minimum file information in a specific format. In the following header format description, underlined character strings are to be fixed, as indicated, and the rest of the information is variable.

Record 1: FORMAT: STATE-VS

Record 2: PHYSICAL RECORD: 80 BYTES, LOGICAL RECORD: 80 BYTES

Record 3: PROJECT: (T10,71A1)

Record 4: ORGANIZATION: (T15,66A1)

Record 5: TYPE OF DATA: (T15,66A1)

Record 6: FILENAME: (T11,nnnnnn.mdd) DATE OF DATA COLLECTION: MM/DD/YY

Record 7: DELTA T: VALUE =(T20,I3) UNITS CODE = (T39,I2)

This record provides information about time interval between soundings.

UNITS CODE = 0 indicates interval is irregular
= 1 indicates interval is in seconds
= 2 indicates interval is in minutes
= 3 indicates interval is in hours

(e.g. 3-hourly soundings defined by value = 3, code = 3).

Record 8: NO. OF PARAMETERS PER RECORD: (T30,I4)

Record 9: DATA RECORD FORMAT: (Data encoding format in parenthesis) Open parenthesis to be placed in column 21. The encoding format is assumed to contain a syntactically correct FORTRAN format specification utilizing only F, E and X format codes (no I-format please!) and "read record" slashes, suitable for decoding the data. Example: (F6.0, 2E12.4, 2F5.0, 40X)

Record 10: PARAMETER NAMES

Record 11: Logical record 11 should contain the parameter names in the format: n(8A1, 2X), n=number of parameters

Record 12: PARAMETER UNITS

Record 13: Logical record 13 should contain the parameter units in the format: n(8A1,2X), n=number of parameters.

Record 14: DATA MINIMA

Record 15: The actual or possible minimum values of the parameters in data record format

Record 16: DATA MAXIMA

The actual or possible maximum values of the parameters in data record format

Record 17: PLOT MINIMA

Record 18: Suggested lower bound values of the parameters to be used for general plotting purposes

Record 19: PLOT MAXIMA

Record 20: Suggested upper bound values of the parameters to be used for general plotting purposes.

N.B. Data min/max range should include range of valid data values, including outlier (but valid) values.

Plot min/max range would normally include normal data values (and possibly not include valid outliers).

Record 21: NO. OF SUBFILES: (T19,I3)

Record 22: && (end of Main File Header)

(b) Subfile Header

Record 1: SUBFILE (T8,I3) Sequential subfile number

Record 2: LOCATION OF OBSERVATION

Record 3: NAME: (T26,55A1) Literal name of location, if any.

Record 4: INITIAL POSITION: (T26,E14.7,2X,E14.7,2X,E14.7)
LAT LONG ELEV(m MSL)

Record 5: FINAL POSITION: (T26,E14.7,2X,E14.7,2X,E14.7)
LAT LONG ELEV

For stationary platforms (e.g. PIBAL during a single sounding), initial and final positions will be same. For a moving platform, such as an aircraft lidar making a remote vertical profile sounding, the subfile may contain an average profile measured between aircraft initial and final positions during averaging time.

Record 6: TIME OF OBSERVATION

Record 7: DATE: (T26, MM/DD/YY)

Record 8: TIME: (T26, HHMMSS)

Record 9: NO. OF SUBFILE DATA RECORDS: (T30,I10)

Record 10: Start of data records (in specified data record format)

⋮

N data records

⋮

Record 10 + N: Start of comment records (80A1 format)

@@ (End of subfile)

C.3 DOCUMENTATION FOR NWS SURFACE WEATHER OBSERVATIONS DATA

File No.	No. Records	Site No.	Location	Time Period
1	256	109	Columbus, OH	15-JUL to 15-AUG-1980
2	256	124	Mansfield, OH	15-JUL to 15-AUG-1980
3	256	248	Cincinnati, KY	15-JUL to 15-AUG-1980
4	256	249	Dayton, OH	15-JUL to 15-AUG-1980

The files contain data for a single site for the time period indicated. Each record contains the data for one reported hour, with the typical station reporting every three hours for a total of eight records per day. The records are 128 characters each and are formatted as follows:

Name	Field Width	Columns	Units
site number	4	1- 4	(1-330)
year	3	5- 7	yr (74-82)
month	3	8- 10	mo (1-12)
day	3	11- 13	da (1-31)
hour	3	14- 16	hr (0-23) LST
obstr. to vision	3	17- 19	*
dewpoint	5	20- 24	degrees F
wind direction	3	25- 27	degrees/10
wind speed	3	28- 30	knots
temperature	5	31- 35	degrees F
wet bulb temperature	5	36- 40	degrees F
relative humidity	4	41- 44	percent
total sky cover	3	45- 47	tenths
sky layer 1	4	48- 51	*
sky layer 2	4	52- 55	*
sum sky 1 and 2	3	56- 58	tenths
sky layer 3	4	59- 62	*
sum sky 1, 2 and 3	3	63- 65	tenths
sky layer 4	4	66- 69	*
opaque sky cover	3	70- 72	tenths
ceiling height	4	73- 76	100 feet *
sky condition	6	77- 82	*
extinction coeff.	6	83- 88	*
liquid precip.	4	89- 92	*
frozen precip.	4	93- 96	*
sea level pressure	6	97-102	mb * 10
station pressure	5	103-107	inches Hg
height of sky layer 1	4	108-111	*
height of sky layer 2	4	112-115	*
height of sky layer 3	4	116-119	*
height of sky layer 4	4	120-123	*
RH-corr. ext. coeff. (only if no precip)	5	124-128	*

* please see the NWS HISTORICAL and PARALLEL FILES documentation for description, additional information and missing data flags

NWS HISTORICAL and PARALLEL FILES

Column header	Description	No data flag
HR	Hour of day	-1
OV	Obstructions to Vision 2 flags ij i: fog-dust-sand flag j: smoke-haze flag see * for codes	-1
DP	Dew point °F	-106
WD	Wind direction degrees/10	-1
WS	Wind speed Knots	-1
TP	Temperature °F	-106
WB	Wet Bulb Temperature °F	-106
RH	Relative Humidity %	-1
TS	Total sky cover Tenths	-1
L1	Sky layer 1 2 flags ab a: amount of lowest layer Tenths (0-10) b: type of cloud see ** for codes (0-9)	-1
L2	Sky layer 2 2 flags ab** (as above)	-1
S2	Sum cover of layers 1 & 2 Tenths	-1
L3	Sky layer 3 2 flags ab** (as above)	-1
S3	Sum cover of layers 1, 2, & 3	-1
L4	Sky layer 4 2 flags ab** (as above)	-1
OP	Opaque sky cover Tenths	-1
CEIL	Ceiling height 100 ft 999=unlimited	-1
SKY	Sky condition 4 flags xyzw x: 1st sky cover layer y: 2nd sky cover layer z: 3rd sky cover layer w: 4th sky cover layer see *** for codes	-1
BEXT	Extinction coefficient x 100 10^{-4} m^{-1} B_{ext} = 24.2333/visibility	-1
LIQP	Liquid precipitation 3 flags ijk i: thunderstorm flag j: rain and freezing rain flag k: drizzle flag see**** for codes	-1
FRZP	Frozen precipitation 3 flags lmn l: snow, snow pellets, ice flag m: snow showers, grains flag n: ice, hail flag see ***** for codes	
SEAP	Sea level pressure x 10 mb	-1
STAP	Station pressure x 100 inches of Hg	-1

Column header	Description			No data flag
H1	Height of sky layer 1	hundreds of feet	999=unlimited	-1
H2	Height of sky layer 2	hundreds of feet	999=unlimited	-1
H3	Height of sky layer 3	hundreds of feet	999=unlimited	-1
H4	Height of sky layer 4	hundreds of feet	999=unlimited	-1

CODES

* Obstructions to vision

i: fog-dust-sand

0	none
1	fog
2	ice fog
3	ground fog
4	blowing dust
5	blowing sand

j: smoke-haze

0	none
1	smoke
2	haze
3	smoke and haze
4	dust
5	blowing snow
6	blowing spray

** Sky layer L1, L2, L3, L4 ab

b: type of cloud

0	none
1	fog
2	stratus
3	stratocumulus
4	cumulus
5	cumulonimbus
6	altostratus
7	altocumulus
8	cirrus
9	cirrostratus

if ab = 110 then amount of lowest layer = 10
type = obscuring phenomenon other than fog

*** Sky condition sky xyzw

0	clear	cloud cover	.05
1	thin scattered	cloud cover	.1 - .5
2	scattered		
4	thin broken	cloud cover	.6 - .9
5	broken		
7	thin overcast	cloud cover	1.0
8	overcast	cloud cover	1.0

for x only:
- 9 partial obscuration--not all sky hidden by surface based layer
- 10 obscuration--all sky hidden by surface based layer

CODES (continued)

**** Liquid precipitation LIQP ijk

i: thunderstorms

0	none
1	thunderstorm
2	heavy/severe thunderstorm
3	tornado--land waterspout--water

j: rain and freezing rain

0	none
1	light rain
2	moderate rain
3	heavy rain
4	light rain showers
5	moderate rain showers
6	heavy rain showers
7	light freezing rain
8	moderate freezing rain
9	heavy freezing rain

k: drizzle

0	none
4	light drizzle
5	moderate drizzle
6	heavy drizzle
7	light freezing drizzle
8	moderate freezing drizzle
9	heavy freezing drizzle

***** Frozen precipitation FRZP lmn

l: snow, pellets, ice

0	none
1	light snow
2	moderate snow
3	heavy snow
4	light snow pellets
5	moderate snow pellets
6	heavy snow pellets
8	ice crystals

m: snow showers, grains

0	none
1	light snow showers
2	moderate show showers
3	heavy snow showers
7	light snow grains
8	moderate snow grains
9	heavy snow grains

n: ice and hail

0	none
1	light ice pellets
2	moderate ice pellets
3	heavy ice pellets
5	hail
8	small hail

C.4 DOCUMENTATION OF NWS-WIND FORMAT
(NWS UPPER AIR WIND DATA)

Filename:

UAWIND. MDD
/ \
Upper Air Wind — Month, Date (e.g. 724 = July 24)

Data Organization: By observation time.
(up to 4 times per day: 00, 06, 12, 18 GMT)

DATA ORGANIZATION FOR EACH OBSERVATION TIME

- Time Record
  - Station Record (Stn 1)
    - Wind record (Height 1)
    - " record (Height 2)
    - .
    - .
    - .
  - Station Record (Stn 2)
    - .
    - .
    - .
    - (etc)

Only data of stations within about 200 miles of Columbus, OH included in these files.

Data Format

Time Record:	MONTH,	YEAR,	DAY,	HOUR (GMT),	NO. OF STATIONS,	NO. OF RECORDS,	MET FIELD
	A3 ,	I4 ,	I2,	I2 ,	I4 ,	I5 ,	A1(=W, Wind) (=T, Temp)

Station Record:	STATION I.D. ,	LAT (N) (DEG x 100) ,	LONG (W) (DEG x 100) ,	ELEV (M MSL) ,	AVG TERRAIN HEIGHT (m MSL) ,	NUMBER OF DATA RECS. (Levels)
	I5 ,	I5 ,	I7 ,	I5 ,	I5 ,	I2

Data Record:	ALT , (m MSL)	WIND DIR (DEG) ,	WIND SPEED (m/s x 10)
	I5 ,	I3 ,	I4

C.5 DOCUMENTATION OF NWS-TEMP FORMAT
(NWS UPPER AIR TEMP DATA)

Filename: UATEMP. MDD

Upper Air Temp — Month, Date (e.g. 724 = July 24)

Data Organization: By observation time.
(up to 4 times per day: 00, 06, 12, 18 GMT)

DATA ORGANIZATION FOR EACH OBSERVATION TIME

```
Time Record
     Station Record (Stn 1)
          Temp record (Height 1)
            "  record (Height 2)
                 .
                 .
                 .
      Station Record (Stn 2)                      Only data of
                 .                                stations within
                 .                                about 200 miles of
                 .                                Columbus, OH
               (etc)                              included in these
                                                  files.
```

Data Format

Time Record:

MONTH	YEAR	DAY	HOUR (GMT)	NO. OF STATIONS	NO. OF RECORDS	MET FIELD
A3	I4	I2	I2	I4	I5	A1(=W, Wind) (=T, Temp)

Station Record:

STATION I.D.	LAT (N) (DEG x 100)	LONG (W) (DEG x 100)	ELEV (M MSL)	AVG TERRAIN HEIGHT (m MSL)	NUMBER OF DATA RECS. (Levels)
I5	I5	I7	I5	I5	I2

Data Record:

ALT (m MSL)	PRESSURE (mb x 10)	TEMP (DEG K x 10)	DEW POINT (DEG K x 10)
I4	I3	I4	I4